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NORWAY'S EVOLVING CHAMPION: STATOIL AND THE POLITICS OF STATE ENTERPRISE

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About the National Oil Company Research Platform

While the role of the state is declining in nearly every sector of world economic activity, in hydrocarbons the pattern is quite different. State-controlled oil companies—so-called national oil companies (NOCs)—remain firmly in control over the vast majority of the world's hydrocarbon resources. Some NOCs are singular in their control over their home market; others engage in various joint ventures or are exposed to competition. PESD's study on National Oil Companies focuses on fifteen NOCs: Saudi Aramco, NIOC (National Iranian Oil Co), KPC (Kuwait Petroleum Co), PDVSA (Petróleos de Venezuela), ADNOC (Abu Dhabi National Oil Company), NNPC (Nigerian National Petroleum Corporation), PEMEX, Gazprom, Sonatrach, CNPC, Petrobras, Petronas, ONGC, Sonangol, and Statoil.

These enterprises differ markedly in the ways they are governed and the tightness of their relationship with government. NOCs also vary in their geological gifts, as some are endowed with prodigious quantities of "easy" oil while others must work harder and apply highly advanced technologies; some have sought gas, which requires different skills and market orientation than oil, while others stay focused on liquids. These case studies explore whether and how these and other factors actually explain the wide variation in the performance of NOCs.

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Norway's Evolving Champion: Statoil and the Politics of State Enterprise

Mark C. Thurber and Benedicte Tangen Istad

1. Introduction

Den Norske Stats Oljeselskap AS (“Statoil”) was founded in 1972 as the national oil company of Norway. Along with Brazil’s Petrobras, Statoil¹ is frequently considered to be among the state-controlled oil companies most similar to an international oil company in governance, business strategy, and performance. Partially privately-owned since 2001, its formal governance procedures are beyond reproach. The company is a technologically capable producer, having built up expertise in deep water² and harsh environments from years of experience on the Norwegian Continental Shelf (NCS).³ Strategically, it hopes to leverage these home-grown engineering advantages to expand its international production, which now comes principally from Angola and Azerbaijan, with significant contributions from Algeria, Canada, the US Gulf of Mexico, and Venezuela as well.

Statoil’s development and performance have been intimately connected to its relationship with the Norwegian government over the years. Norway’s approach of separating policy, regulatory, and commercial functions in petroleum has inspired admiration and imitation as the canonical model of good bureaucratic design for a hydrocarbons sector. For example, Nigeria’s current oil and gas reform plan envisions re-constituted institutions whose functions and relationships would strikingly parallel those in Norway.⁴ Policymakers in Mexico have also looked to Norway’s separation-of-functions

¹ The company became StatoilHydro with its merger with the petroleum operations of Norsk Hydro in 2007 and then reverted to the Statoil moniker in November 2009. We here use the Statoil name to refer to all incarnations of the company, except in cases where we specifically want to distinguish between the company before and right after the merger with Norsk Hydro.

² Wells offshore of Norway are no longer considered to be at the frontier for water depth, but the years during which they were near the frontier, particularly given the challenging weather to which were exposed, pushed Norwegian firms to develop leading technologies for the combination of deep water and harsh conditions.

³ The Norwegian Continental Shelf (NCS) constitutes the entire offshore region over which Norway has resource sovereignty. It includes parts of the North Sea, Norwegian Sea, and Barents Sea. As described in section 2, the extent of the NCS was determined through international negotiations to extend to the median line between Norway and other bordering countries in both the North Sea and Norwegian Sea. The exact border with Russia in the Barents Sea is still under dispute.

⁴ The plan outlined by Nigeria’s Oil and Gas Reform Implementation Committee (OGIC) as of 2008 proposed re-creating

model as a possible blueprint for improving the country's woeful performance in petroleum. At the same time, other countries have followed quite different paths and yet still performed well (Thurber, Hults, and Heller 2010). Angola, for example, has built a productive and fairly efficient petroleum sector with almost no formal separation of policy, regulatory, and commercial roles.

The reality is that Norway's comparative success in hydrocarbons development, and that of Statoil, has been about much more than a formula for bureaucratic organization. Belying the notion of a pristine "Norwegian Model" that unfolded inexorably from a well-designed template, the actual development of Norway's petroleum sector at times was, and often still is, a messy affair rife with conflict and uncertainty. But Norway had the advantage of entering its oil era with a mature, open democracy as well as bureaucratic institutions with experience regulating other natural resource industries (hydropower generation, fishing, and mining, for example). Thus far, the diverse political and regulatory institutions governing the petroleum sector—and governing the NOC—have collectively proven robust enough to handle the strains of petroleum development and correct the worst imbalances that have arisen. What appears as consensus governance in retrospect was often really a process of accommodation between contending parties in this system. In this case study we closely trace the progression of the state-NOC relationship in Norway over time, and we examine the way that this relationship has shaped the performance and strategy of Statoil. We make the following six principal observations from our research.

First, Norway's policy orientation from the start was focused on maintaining control over the oil sector, as opposed to simply maximizing revenue. Norway began its petroleum era as a country of fewer than 4 million people with well-functioning institutions and favorable economic conditions including very low unemployment. As a result, the country was more concerned with the possible negative ramifications of oil wealth than with any special advantage that could be gained from it. Its policy making process was thus very cautious, involving among other things voluminous economic studies of the absorptive capacity of the Norwegian economy and the possible impacts of oil and gas wealth on society. To avoid negative impacts of oil, the government sought to moderate the pace of

Nigeria's national oil company NNPC as a fully commercial entity like Statoil; rolling out a focused policy making body (the Nigerian Petroleum Directorate) analogous to Norway's Ministry of Petroleum and Energy; empowering an autonomous regulator (the Nigerian Petroleum Inspectorate) that parallels the Norwegian Petroleum Directorate; and even creating a government agency to oversee state investment in the sector (the National Petroleum Assets Management Agency), echoing the role of government-owned company Petoro in Norway.

petroleum development and to skillfully regulate the activities of international and domestic oil operators. The latter objective motivated efforts to build up government knowledge and competence in oil and gas. Some politicians believed that formation of a national oil company would help in this process.

Second, the principal means through which Norway was able to exert control over domestic petroleum activities was a skillful bureaucracy operating within a mature and open political system. Civil servants gained knowledge of petroleum to regulate the sector through systematic efforts to build up their own independent competence, enabling them to productively steer the political discourse on petroleum management after the first commercial oil discovery was made. The “Norwegian Model” of separating commercial, policymaking, and regulatory functions worked in large part because the country’s bureaucracy could draw on enough talent and experience to develop into a legitimate counterbalance to the power and ambition of NOC Statoil. Robust contestation between socialist and conservative political parties also helped contribute to a system of oil administration that supported competition (including between multiple Norwegian oil companies as well as international operators) and was able to evolve new checks and balances as needed. A particularly important instance of corrective policy action occurred in 1984, when the government decided to strip more than half of Statoil’s assets from its balance sheet to attenuate its cash flow and reduce its influence over NCS resource development decisions.

Third, Statoil did play an important role in contributing to the development of Norwegian industry and technological capability, in large part because it had the freedom to take a long-term approach to technology development. With a strong engineering orientation and few consequences for failure as a fully state-backed company, Statoil developed a culture valuing innovation over development of a lean, commercially-oriented organization. It prioritized long-term R&D and tackled projects that were highly ambitious technically. This orientation led to a number of unalloyed triumphs, including the laying of the Statpipe gas pipeline across the Norwegian trench in the 1980s and the pathbreaking development of subsea production systems in the 1980s and 1990s (Knudsen 1997). It also contributed to severe cost overruns and delays in a few pioneering efforts, most of which were ultimately successful but not before attracting severe criticism in Norway for their problems in the development phase. As the most significant employer of domestic services companies, Statoil’s technology investments helped accelerate the development of the entire Norwegian supply industry in

petroleum, turning the North Sea into the “world’s technology laboratory.” Along the way, oil operations in Norway gained a reputation for incurring higher costs relative to comparable activities across the border in the UK. However, despite possible implications for government revenue collection in the short term, it is difficult to argue that the country’s strategy of pouring money into indigenous technology development by means of Statoil (and other broad-based R&D initiatives) has not been an overall success. It is likely to have yielded significant long-term economic benefits by contributing to the development of a high-value-added domestic industry in oil services.

Fourth, the formal relationship between Statoil and the government has become more arm’s-length as Norway’s resources and oil expertise have matured. Under its first CEO, experienced Labour politician Arve Johnsen, Statoil aggressively flexed its political muscles to gain special advantages in licensing and access to acreage. Politicians at the time (especially but not exclusively in the Labour party) justified these privileges as necessary support for the fledgling Norwegian enterprise in oil. As domestic resources began to mature, Statoil’s leadership (starting with Harald Norvik in 1988, and continuing through the tenures of subsequent CEOs Olav Fjell and Helge Lund) saw the need to forge an independent corporate identity and governance structure that would allow the company to compete effectively abroad.⁵ For its part, the government by the 1980s came to worry more about Statoil’s excessive dominance than its fragility, leading it to revoke many of the company’s special privileges. At the same time, the government over time became increasingly willing to grant Statoil a level of formal corporate autonomy—most notably by allowing it to expand internationally in the 1990s and partially privatize in 2001—that would not have been politically possible earlier in the development of the Norwegian petroleum sector.

Fifth, notwithstanding changes in their formal relationship, it has remained impossible to sever the close ties between the Norwegian state and a company with the domestic significance of Statoil. These residual ties can manifest in various ways, including: 1) the effect on policy decisions of direct personal connections between Statoil leaders and politicians; 2) persistent “Norway-centric” influences on Statoil’s strategy even in the larger context of efforts to internationalize; and 3) public pressure from politicians who continue to see themselves as Statoil’s masters. The power of personal links between company leaders and politicians was evident in the approval process for the 2007 merger of Statoil

⁵ Arve Johnsen in fact had international designs for Statoil from the start, but government resistance did not permit such a strategy during his tenure.

with the oil and gas division of Norwegian competitor Norsk Hydro, which left the merged company controlling a massive 80% of NCS production operatorship. Statoil and Norsk Hydro directly and successfully lobbied Prime Minister Jens Stoltenberg in favor of the merger, turning the deal into a foregone conclusion before there was any chance for a broader debate among politicians, regulators, and the public. The merger both revealed and exacerbated Statoil's difficulty in disengaging its strategic focus from Norway. While stated goals of the merger included the realization of cost-saving synergies on the NCS and creation of a unified Norwegian champion that could more effectively compete abroad, it also had the effect of making Statoil much more wedded to the NCS while directly adding few significant international assets.

The existence of a majority state-owned company like Statoil—especially one that is unrivalled in the country in visibility, importance and historical sense of its being “Norwegian property”—gives politicians and the public the expectation and perception of control over operational questions. Even while direct intervention of the Ministry of Petroleum and Energy in Statoil strategy has mostly disappeared, politicians continue to weigh in as though they were making policy for the company. Statoil's investments in Canada oil sands and operations in poorly-governed countries have been particular lightning rods for political criticism, even as the government has declined to insert itself in a formal way into such questions. Minority shareholders, as is often true for partially privatized NOCs, can be confused about who really controls the key decisions. The political potency of the perception of control on the part of politicians—which we believe was largely illusory even when Statoil was fully state-owned—is why the government is likely to retain more than a two-thirds stake in Statoil for the foreseeable future. In a sense, current governance arrangements are ideal for politicians: They remain free to score political points by criticizing Statoil without needing to worry that their invective will adversely affect operational performance. Meanwhile, Statoil will be required to expend resources on managing and responding to political noise on the home front for some time to come.

Sixth, Statoil's experience thus far casts doubt upon the conventional wisdom that NOC-NOC connections provide material benefit in opening resource access around the world. To the extent that such linkages are important, Statoil would seem to be among the best-positioned to benefit from them as both a highly competent producer and a company that might be sympathetic to the needs of resource-rich countries. However, there are few instances so far where Statoil's status as an NOC has been an obviously decisive factor in unlocking resources that would otherwise be off-limits. In fact,

the company's biggest expansionary efforts in recent years have been through M&A in regions like the US and Canada where resources are allocated through open processes. Arguably the most significant case in which Statoil's NOC status played to its advantage in expanding its international resources was in attracting BP as a partner in the 1990s.

The remainder of this study is organized as follows. Section 2 provides a short history of Norway's resource development from both a hydrocarbon and an institutional perspective. Section 3 describes the goals that Norway formally defined for petroleum development in the years following the Ekofisk find and then the policies and institutional structures—an NOC central among them—that it put in place to achieve them. Section 4 traces the subsequent evolution of state-NOC relations over time. It first examines how the government was forced at various points to counterbalance an ambitious and politically astute young Statoil. The section then explores Statoil's more recent evolution towards a corporate identity distinct from Norway, especially through internationalization of operations and partial privatization. Finally, the section identifies those respects in which Statoil today is relatively free of political entanglements and those in which it continues to influence and be influenced by the political process in Norway. Chapter 5 assesses Statoil's performance and strategy in its most salient dimensions—focusing on technology development and project execution as well as degree of success in international expansion—and how they have been affected by the company's relationship with the state. Chapter 6 concludes the study by considering key challenges going forward for both Statoil and the state of Norway.

2. A Brief History of Norway's Resource Development

Norway entered its oil era with the significant advantage of possessing a highly competent bureaucracy with previous experience regulating natural resource industries like hydropower, fishing, and mining. (The country's experience with civil engineering and shipbuilding also proved to be helpful technical background for the nascent petroleum industry.) The ability to adapt the bureaucracy to oil matters even before any major discoveries had been made was central to Norway's effective stewardship of hydrocarbons. Spurred to action by a petition in 1962 by Phillips Petroleum to the Norwegian government for an exclusive concession over the Norwegian Continental Shelf (NCS), Jens Evensen at the Ministry of Foreign Affairs began to assemble a core group of civil servants to work on

petroleum. The first task facing Norwegian bureaucrats was to secure the most favorable possible boundaries of Norway's resource sovereignty, which they successfully accomplished in negotiations with other states bordering the North Sea.⁶

The next main task confronting Norway's still-inexperienced pioneers in petroleum⁷ was to set up a framework for licensing exploration blocks to private companies. Evensen was particularly focused on Denmark's experience as a cautionary tale (Lerøen 2002). That country ceded all of its oil and gas exploration and production rights to Danish shipbuilder A.P. Møller in 1962; only later was the concession gradually unraveled by the government after attracting a storm of controversy amid the high oil prices of the 1970s and early 1980s (Hahn-Pedersen et al 1999). The young Norwegian civil servants were given substantial resources to learn everything they could about how to design effective licensing policy.⁸ In April 1965, the work of the initial group of government employees⁹ was codified in a Royal Decree which opened the first license round and laid down the basic guidelines for Norway's administration of oil and gas. (A formal law regulating petroleum was not put in place until 1985, and the broad outlines of Norway's petroleum governance even today remain largely unchanged from this initial decree of 1965.) Personnel at the Ministry of Industry continued to refine their expertise through learning-by-doing over subsequent licensing rounds.¹⁰

⁶ The Geneva Convention, which Norway had not yet ratified at that point, defined a nation's resource sovereignty as extending into its adjoining seabed up to the maximum depth at which resource exploitation was feasible, and not further than the median line between countries. Because the Convention defined this maximum depth as 200 meters and the Norwegian Trench cuts through the continental shelf to a depth of more than 700 meters, there was wariness from the Norwegian side that a strict interpretation of the Convention could dramatically restrict the country's area of resource sovereignty. With this in mind, skillful Norwegian negotiators in the Ministry of Foreign Affairs were able to first obtain acceptance of the median-line principle from the UK in March 1965 and then subsequently from Denmark in December of the same year (Al-Kasim 2006). Norway's lack of pressing economic need for hydrocarbon revenues probably put it at a substantial advantage in negotiations with the UK, which was much more anxious to quickly resolve any disputes to enable development to proceed (Noreng 1980).

⁷ Nils Gulnes was hired out of law school into the Ministry of Industry at the beginning of 1965 as the first government employee dedicated full-time to petroleum. As Gulnes recalls, his recruiters sought someone with a legal background, ability in English, and interest in working with "something called oil" – specific knowledge of petroleum regulation would have to be learned on the job (PESD Interviews).

⁸ Britain, which had just licensed 374 offshore blocks in September 1964 (Hardman 2003), was an obvious role model right across the North Sea median line. Angus Beckett, Undersecretary at the British Ministry of Power, proved an important mentor to the Norwegians (PESD Interviews). The young Norwegian officials in the Ministry studied the Dutch and German experiences as well; they were also given free rein to travel further afield to understand how other countries managed their petroleum sectors. Petroleum employee #5 at the Ministry of Industry, Karl-Edwin Manshaus, who later became Permanent Secretary (the top civil service position) at the Ministry of Petroleum and Energy, recalls trips to Baton Rouge, Houston, Iran, and other parts of the Middle East soon after he started work.

⁹ This group included key players Carl August Fleischer, Leif Terje Løddesøl, and Nils Gulnes in addition to Evensen.

¹⁰ Lessons from each licensing round were incorporated into the design of the next one, and officials showed impressive ingenuity in working around gaps in their own knowledge until the gaps could be closed. For example, after winners of the 1965 license round were selected, the civil servants managing oil were faced with the challenge of evaluating the

The initial licensing framework led to Esso spudding the first well on the Norwegian Continental Shelf (NCS) in 1966. Gas condensate was found by Phillips in the Cod Field in 1968, and the first commercially-viable oil was discovered in the Ekofisk Field (see Figure 1) by Phillips at the very end of 1969. Only after the discovery of Ekofisk did oil attract significant interest from politicians and broader Norwegian society. Having built up their knowledge and capabilities in the five years preceding the Ekofisk discovery, Ministry of Industry officials were able to steer the debate over how Norway should manage its newfound oil.¹¹

Developing resources on the NCS was technologically challenging from the very start. Ekofisk was in only moderately deep water (70-75 meters), but creating offshore platforms even at this depth that would be stable in the harsh winter conditions of the North Sea required innovations in platform technology. In addition, the oil at Ekofisk was in a chalk reservoir, whose ability to sustain long-term production was poorly understood at the outset (Al-Kasim 2006; Tofte et al 2008). Test production from Ekofisk took place from 1971 to 1974, with full production starting thereafter. As a partner in the Petronord Group which owned a share of Ekofisk,¹² Norsk Hydro became the first Norwegian equity participant in oil and gas production on the NCS when Ekofisk came on line in 1971 – see Figure 2. The first natural gas was pumped from Ekofisk in 1977.

work programs of the successful licensees, despite having no independent technical capability to do so. This challenge was overcome by using the number of bids received for a given block as a proxy for the desirability of the block, and then judging the ambition of a proffered work plan in accordance with this metric (Al-Kasim 2006).

¹¹ According to Nils Gulnes, who started at the Ministry of Industry in 1965 as the first employee working full-time on petroleum: “The politicians were not interested at all until Ekofisk. That gave us [early Ministry officials] five years to get it right.... After 1969, people interfered more. The benefit was that we knew so much more [by then]. The parliament asked us to teach. The government asked us to teach.” (PESD Interviews).

¹² Principal partners in the Petronord Group were Norsk Hydro, Elf Aquitaine, and Total, with several other French companies participating as well. Petronord had acquired its shares in exploration block 2/4, in which Ekofisk was found, through a swap with the Phillips Group (Phillips, Petrofina, and Agip). (Al-Kasim 2006)

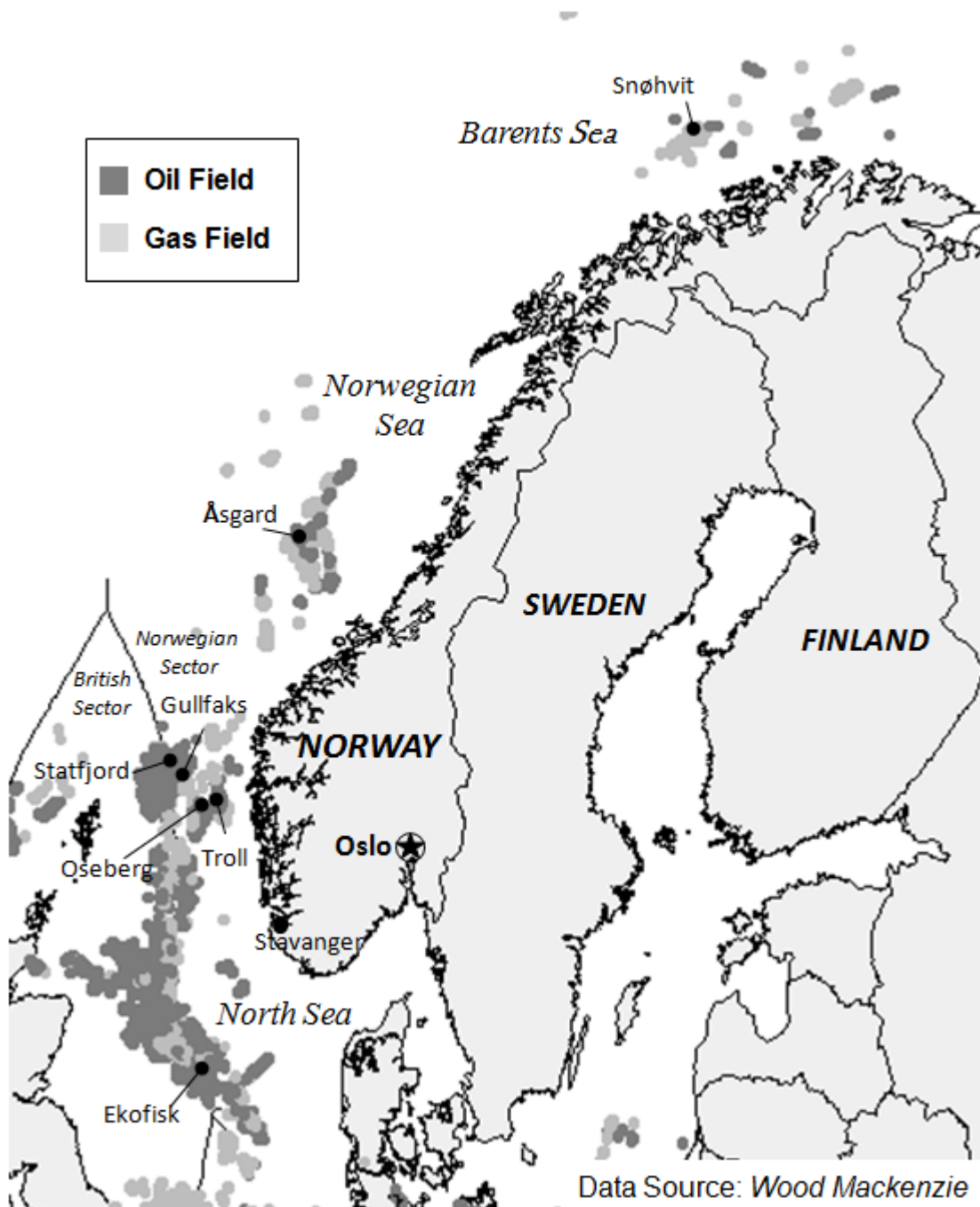


Figure 1 Map of Norwegian oil and gas resources.

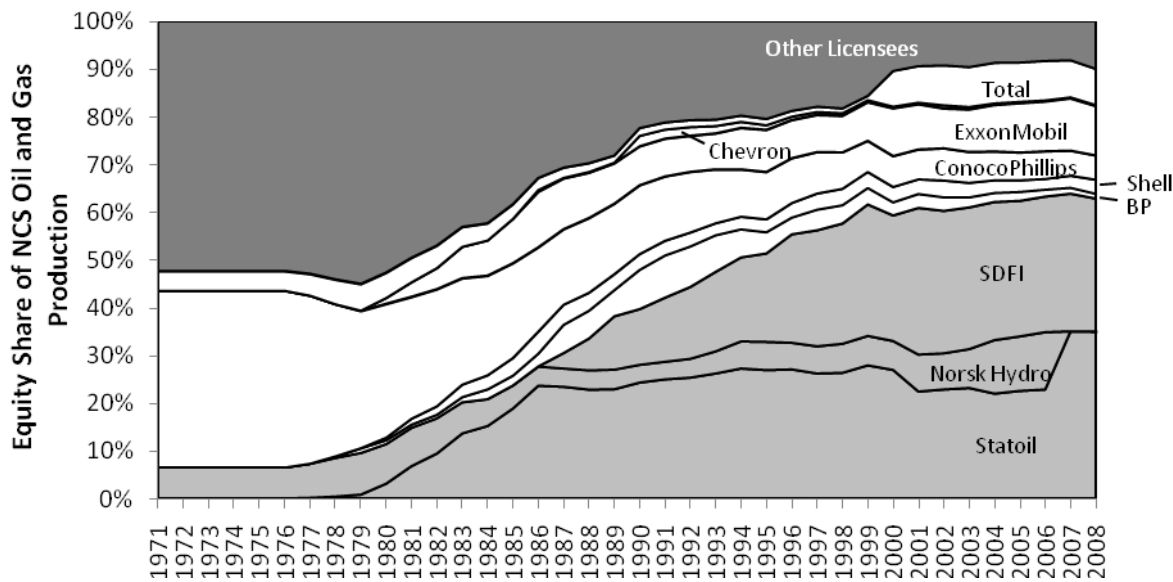


Figure 2 Equity share of NCS production held by different companies over time, with production for the year attributed to the equity holder at year end. Companies that later merged are grouped according to their current merged form, with the exception of Statoil and Norsk Hydro. Starting in 1985, the Norwegian government took direct equity interest in oil and gas fields through the State's Direct Financial Interest (see Section 4), labeled here as SDFI. Data Source: Norwegian Petroleum Directorate.

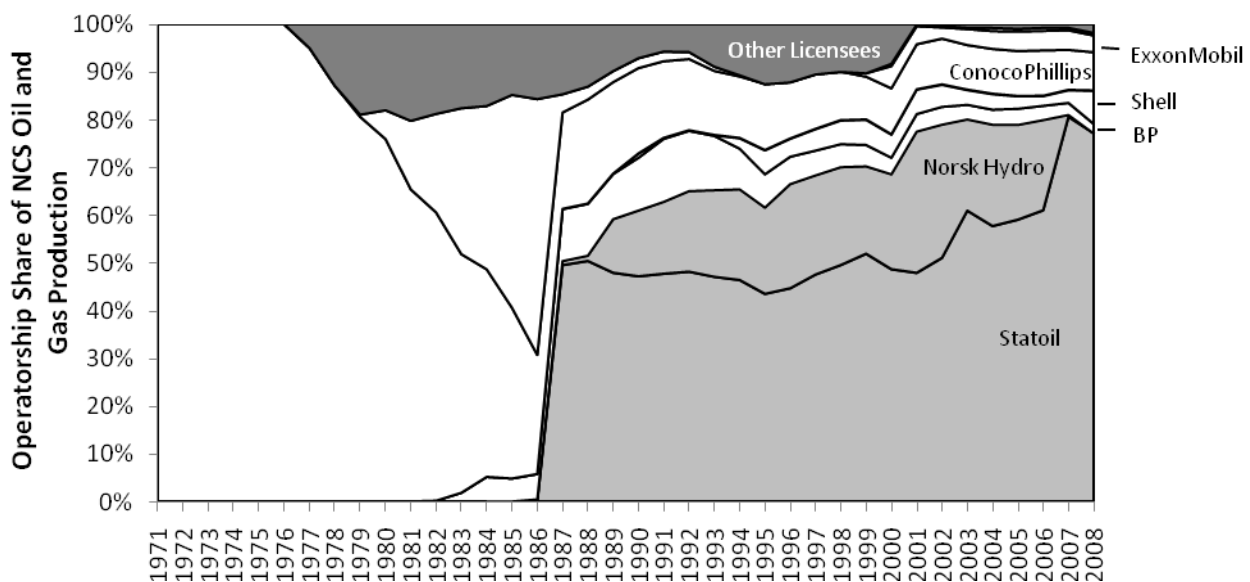


Figure 3 Share of NCS production operated by different companies over time, with production for the year attributed to the operator at year end. Companies that later merged are grouped according to their current merged form, with the exception of Statoil and Norsk Hydro. Data Source: Norwegian Petroleum Directorate.

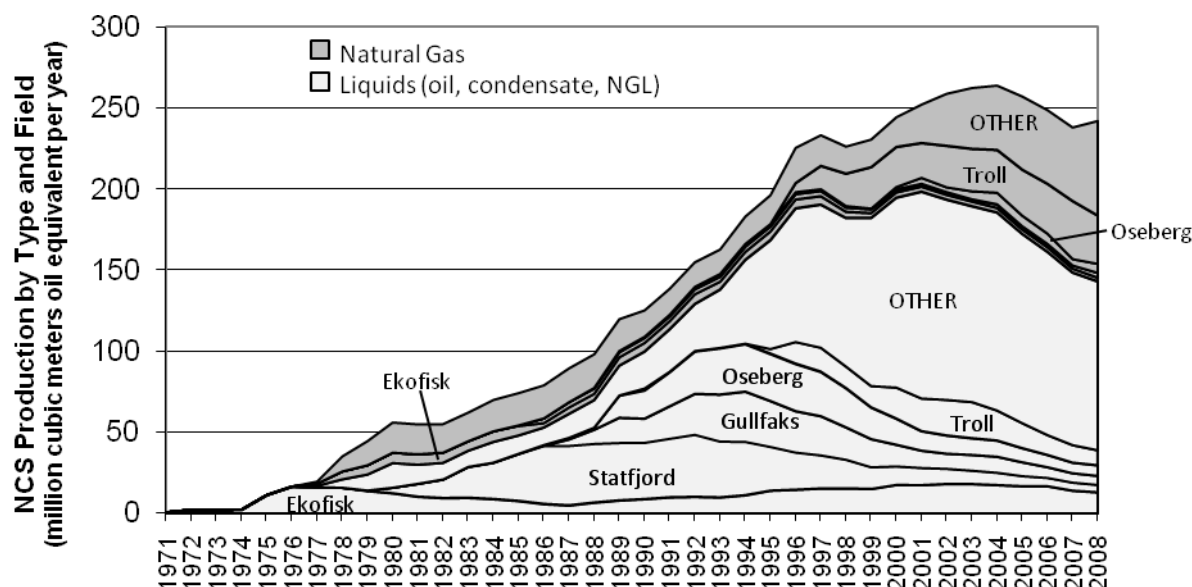


Figure 4 NCS production by hydrocarbon type and field. Data Source: Norwegian Petroleum Directorate.

Determining that an NOC would be an important tool for resource management, Norway in 1972 formed 100%-state-owned oil company Den Norske Stats Oljeselskap AS (the “Norwegian State Oil Company”), shortened to “Statoil.” Not long before, the Norwegian government had increased its stake in Norwegian industrial conglomerate and petroleum operator Norsk Hydro to 51%.¹³ The government also directed the remaining private Norwegian petroleum interests to merge, creating a third Norwegian player in oil and gas, Saga Petroleum. To enhance its ability to monitor and control the petroleum industry, the government established the Norwegian Petroleum Directorate (NPD) in Stavanger¹⁴ to offer independent technical and regulatory expertise to the Ministry of Industry, which set hydrocarbon policy at the time.¹⁵

¹³ The decision in late 1970 to boost the state’s share in Norsk Hydro made it seem as though that company would become the state’s principal commercial tool in petroleum. However, as will be discussed later, the new government that came to power in 1971 decided instead to create an entirely new NOC in the form of Statoil.

¹⁴ Stavanger, on the southwest coast of Norway, was the home of Statoil and became a major center for the country’s petroleum industry. The NPD’s physical separation from the Ministry and the rest of the government in Oslo may have helped contribute to its independence.

¹⁵ The Ministry of Petroleum and Energy was created in 1978 to focus solely on petroleum affairs. In 2004, regulatory responsibility for safety was split out from the NPD into a new body, the Petroleum Safety Authority, which reports to the Ministry of Labor and Social Inclusion.

On the back of strong advocacy by Statoil's politically-adept CEO Arve Johnsen (and also from 1972-1974 its forceful chairman Jens Christian Hauge), Statoil was given a 50% carried interest in all new exploration blocks by 1974, with an additional "sliding scale" put in place that allowed it to claim up to a full 80% interest after a discovery. This meant that Statoil risked no capital in the exploration phase but could then opt in to a dominant equity share of the field once a discovery was made. International partners still operated all fields at that point. To facilitate development of indigenous expertise, the country aimed to provide operatorship opportunities to Norwegian players. A "golden block" expected to harbor lucrative resources was granted to Statoil in 1978; it indeed yielded oil in the Gullfaks field in the northern part of the North Sea, and Statoil took on its first field operatorship at Gullfaks in 1981.

Other fields were initially granted to international operators with the provision that Norwegian companies would have the option to take over operatorship after a certain period of time. The most important early example was the Statfjord field, which was discovered in 1974 and developed by Mobil, with first production in 1979. In taking over the field from Mobil in 1987 and adding Statfjord's volumes to production from Gullfaks which had recently come on-line, Statoil instantly became the largest operator of production on the NCS (Figure 3). Norsk Hydro started producing in 1988 from its own operations at the Oseberg field further south, with volumes becoming significant by 1989. The Statfjord, Gullfaks, and Oseberg fields together produced the lion's share of North Sea oil into the mid-1990s (Figure 4), facilitating continued Statoil and Hydro dominance of NCS production.

In the early 1980s, a shift in political alignment, with a Conservative Party government replacing the previous Labour one, spurred moves to check an increasingly powerful Statoil. To stem the company's cash flow, Statoil's balance sheet was split in two in January 1985, with more than half of Statoil's interests in oil and gas fields, pipelines, and other facilities transferred to the newly-created State's Direct Financial Interest (SDFI) in petroleum. Statoil's power and influence in government were exposed to further public scrutiny in connection with the severe cost overruns in its Mongstad refinery project.¹⁶ This scandal helped lead to the resignation of CEO Johnsen and his replacement in

¹⁶ The Mongstad incident involved a cost overrun of over NOK 6 billion on a NOK 8 billion project to expand the capacity of the formerly BP-owned refinery. The Norwegian press pounced on the excess spending, computing how the money might otherwise have been allocated, for example on hospital beds (The Economist 18 Feb 1989; Oil and Gas Journal 11

1988 with the less political Harald Norvik.

With an eye on Statoil's long-term future beyond the maturing NCS, Norvik set out to build up Statoil's identity as a corporate entity distinct from Norway. Through an alliance with BP from 1990 to 1999, Statoil established some significant international operations, including in Angola and Azerbaijan. Statoil continued its drive towards an independent corporate identity under subsequent CEOs Olav Fjell (1999-2003) and Helge Lund (2004-present). A particularly notable step was the partial privatization of the company. Statoil was listed on the Oslo and New York stock exchanges on June 18, 2001. The state initially sold a 18.3% share of the company and then further reduced its shareholding to around 70% through subsequent share issues in 2004 and 2005.

A more recent seismic shift in the Norwegian petroleum landscape was the merger of Statoil with the oil and gas division of Norwegian competitor Norsk Hydro in October 2007. A justification for the merger was the need to create a unified Norwegian champion with the cash flow and scale to compete more effectively abroad. At the same, the paradox of the merger was that it created an even more dominant player on the NCS—Statoil at the time of this writing controlled roughly 80% of production operatorship—without making significant new international assets available to Statoil.

A characteristic pattern for Statoil over its lifetime has been projects that push the envelope of technology in response to increasingly harsh conditions as developments have moved into deeper water and also further north—first within the North Sea (e.g., Statfjord, Gullfaks, Oseberg, and later major gas field Troll) and then into the Norwegian Sea (e.g., the Åsgard field) and the Barents Sea in the Arctic (e.g., the Snøhvit gas field and associated LNG terminal).

3. State Goal: Control over Petroleum

Following the Ekofisk discovery, the Norwegian parliament (Storting) sought to more formally define both the state's goals for the sector and the instruments it should use to achieve these goals. Norway, with its heritage of transparency and mature democratic institutions, was unusual among oil states in the degree to which it publicly deliberated on these points. Ministry of Industry personnel,

Jul 1988).

with their knowledge accumulated from having managed early activities in the petroleum sector, were able to have a significant influence on the debate. Guiding principles to govern the sector – “The Ten Commandments on Oil Policy” (see Appendix 1) – were laid out by the parliament’s industry committee in mid 1971 after a new Labour government replaced the previous four-party coalition.

Underlying the oil commandments was Norway’s overriding goal of avoiding negative impacts from hydrocarbon development on an economy, political system, and society that were already functioning quite well in the opinion of its citizens. Norway had a population of fewer than 4 million and very low unemployment, and entrenched interests like fisheries or manufacturing that might be negatively affected by a new petroleum industry carried significant political weight. In this respect, Norway’s orientation was different from almost all of the other nations that came into petroleum riches, with a balance of risk and reward that tilted more in the direction of avoiding disruption than seeking immediate economic gain. The contrast between how Norway and the UK approached the potential of North Sea petroleum resources highlighted this difference in national needs. As Øystein Noreng (1980) points out: “The British desperately needed an economic miracle while the Norwegians could do without one.” Norway’s concern about managing the inevitable impacts of large petroleum operations on a small country was expressed in remarkable (and prescient) detail in Parliamentary Report No. 25 (1973-74) from the Ministry of Finance to the Parliament. The document considered potential effects of petroleum development on diverse aspects of society, focusing in particular on macroeconomic balance, employment, and industrial structure, but even touching on such fine-grained topics as possible increased commute times for petroleum workers and consequent disruption of social and family life.

Parliamentary Report No. 25 suggested two dimensions of control over the sector that were considered critical to avoiding negative impacts: first, control over the pace of hydrocarbons development, to ensure that petroleum impacts did not outstrip Norway’s capacity to adjust; and, second, supervisory control over the operations occurring on the NCS. Maintaining adequate supervisory control was understood to require among other things that Norwegian players develop technological know-how in petroleum “to provide the popularly elected institutions with the necessary insight to enable them to supervise and regulate activities which are due to be started up.” (Parliamentary Report No. 25) An ancillary benefit would be the development of Norwegian

technological capability more broadly.¹⁷

Norwegian politicians and civil servants agreed—though not always for the same reasons—that a state-owned oil company was a necessary tool for achieving the country’s objectives in petroleum management. Norway had some existing tradition of managing key industrial efforts by way of state-owned enterprises, and policymakers noticed NOCs increasingly becoming the common currency of other oil- and gas-rich nations (PESD Interviews). Some politicians envisioned an NOC as a direct instrument of state control—a company that would plan production in accordance with government dictates and build up expertise that would directly accrue to government regulators to help them control private players (Dam 1976; Grayson 1981).¹⁸

Ministry personnel, on the other hand, mostly viewed an NOC as an essential administrative strategy to separate government commercial and regulatory functions, rather than as a tool for direct control (PESD Interviews). Civil servants at the Ministry were well aware of the fact that NOCs rarely functioned as pliant agents of government,¹⁹ and they also understood from experience that goals of control could be accomplished through skillful licensing and regulation. Three principal rationales were behind the bureaucrats’ perceived need to create a separate commercial agent of government. First, they felt that the government indeed needed to engage in commercial transactions in oil, but that the Ministry itself lacked the proper administrative structures and competence to do this. An incident that highlighted this deficiency for these civil servants was when Conoco in negotiations offered the Norwegian government a petroleum license in the Netherlands. Ministry officials – lacking a suitable commercial vehicle – temporarily vested state participation in this license in Norwegian arms manufacturer Kongsberg Våpenfabrikk until the license could find a more permanent home after the founding of Statoil in 1972 (PESD Interviews).

Second, Ministry personnel believed that separation of the government’s regulatory and

¹⁷ Parliamentary Report No. 25 expressed this intent, stating: “It is not primarily a question of stimulating industry to undertake deliveries on a large scale, but to ensure that Norwegian industry should engage itself in those sectors where there are possibilities for building-up expertise and for further development. Importance will be attached to enabling Norwegian industry to join in technological developments, so that the country will be competitive in other fields as well when the era dominated by oil activities in this country has ended.” (Parliamentary Report No. 25)

¹⁸ The concern that Norway would struggle to manage its oil sector without knowledge and capability gained from a Norwegian NOC was probably accentuated by the relative lack of even private sector Norwegian expertise in the oil sector—in contrast to the UK, which already had a number of domestic upstream companies (PESD Interviews).

¹⁹ In fact, consultancy Arthur D. Little had explicitly recommended that Norway *not* form an NOC due to the difficulty that states typically have in controlling NOCs (PESD Interviews).

commercial functions was inherently a logical way of avoiding conflicts of interest that could make Norway a less attractive place in which to do business. All of the early Ministry officials we interviewed expressed some variation on the theme that, as Karl-Edwin Manshaus put it, “we realized that we were not businessmen, and that we were sitting on both sides of the table [i.e. as both regulators and competitors].”

Third, the particular sensitivity of Ministry officials to avoiding commercial entanglements²⁰ had its roots in a mining accident in 1962 that killed 21 on the arctic island of Spitsbergen.²¹ The mining company responsible was state-owned, and at that time the head of the mining division at the Ministry of Industry also served on the board of the company. Negligence was alleged, and the ensuing scandal brought down the Labour government in power at the time. Since then, no civil servant in Norway has been allowed to serve on the board of any state-owned company, protecting politicians and government officials when state-owned ventures go bad.²² This is atypical among countries with dominant NOCs. In many countries, in fact, the petroleum minister serves as the chairman of the board of the NOC—as, for example, in the cases of Kuwait, Nigeria, Mexico, and Saudi Arabia. In some cases, such as Iran and to a lesser extent Algeria, NOCs and government petroleum ministries can appear so intertwined at times as to be indistinguishable.

While most politicians and civil servants favored creation of some kind of NOC, a series of political compromises had a large impact on the exact form. The center-right government of Per Borten decided to increase the state’s share of existing oil player Norsk Hydro to 51% in late 1970 with the idea that it could serve as Norway’s commercial instrument in oil. However, the Borten government was replaced in 1971 by a Labour government under Trygve Bratteli, leading to the decision to create Statoil in 1972 as a fully-state-owned NOC. Around the same time, the government encouraged several private Norwegian players in oil to consolidate to form Saga Petroleum. The Norwegian Petroleum Directorate (NPD) was also established as a regulatory and technical advisory organization reporting to the Ministry of Industry but whose autonomy would in theory be assured by a

²⁰ One official at the Ministry of Petroleum and Energy remarks that some of his counterparts from elsewhere in Western Europe poke fun at the Norwegian insistence on scrupulous separation of commercial and regulatory functions as “almost religious.”

²¹ This incident was cited by a number of interviewees as having had a pivotal role in shaping Norwegian attitudes.

²² It could be argued that the existence of Statoil serves this function in a more general sense as well by providing cover for politicians to loudly criticize and disavow company actions when they are unpopular while simultaneously claiming that they have no direct control over what the company does.

separate board of directors (Al-Kasim 2006).²³

These various political compromises in the early 1970s helped set up key checks and balances in several ways. First, the establishment of three principal Norwegian oil companies set the stage for strong domestic competition to emerge later, especially between Statoil and Hydro. Ultimately, the skillful use of licensing policy to balance competition and cooperation among both domestic and foreign players proved to be the single most important regulatory mechanism for the Norwegian government. Second, the simultaneous creation of Statoil and the NPD under the supervision of the Ministry of Industry established the three-part separation of functions – policymaking (Ministry of Industry), technical/regulatory (NPD), and commercial (Statoil) – that is often considered to be “the Norwegian Model” for petroleum. Statoil was supposed to execute the state’s commercial objectives at arm’s length from licensing and regulatory functions to avoid conflicts of interest. The Ministry as representative of the state (the sole shareholder) could exert full control over Statoil, but this control could in theory only be exercised by the Minister acting as the General Assembly²⁴ to the company in order to enable political oversight by Parliament (Al-Kasim 2006). After 1974, Statoil was also directed by Section 10 of its Articles of Association to publically disclose its outlook and strategic plans on an annual basis for Parliamentary feedback. (To some interviewees this was an impressive illustration of government control, to others a largely toothless formality.) The role of the NPD was to offer independent technical advice on petroleum to the Ministry to facilitate control of Statoil and all of the other players on the NCS. The existence of the NPD also would allow the Ministry to focus on policy by relieving it of the all-encompassing portfolio of oil-related activities²⁵ which it had needed to take on in the early years. The reality of how these formal checks and balances functioned over the course of Norway’s petroleum development was imperfect and is discussed in greater detail in Section 4.

²³ The NPD’s board was deemed to be superfluous and abolished in 1991. To the extent that the NPD has been relatively independent of the ministry, this seems to be mainly due to its complementary, more technical skillset. Some interviewees in fact argued that the NPD serves essentially as an extended arm of the ministry and that its autonomy is often overstated.

²⁴ The General Assembly represents the totality of the company’s shareholders; in the case of a fully-state-owned company, the Minister serves as the representative of the state as the only shareholder. Acting as the General Assembly requires the Minister to follow a formal and visible process when providing direction to the company, as opposed to issuing private instructions that are not transparent.

²⁵ After oil was found, the scope of required regulations expanded markedly; employees at the Ministry found themselves testing helicopters to gain insight into the sizes of helidecks that should be required on offshore platforms (PESD Interviews).

From the start of its petroleum era, Norway faced the same fiscal policy challenges confronting any resource-rich state: how to maximize government revenue while still achieving the desired rate of development, and how to deploy the revenue for the maximum benefit of the country. What made Norway unusual among oil states was its conscious effort at the outset of petroleum development to reflect in detail on the effects that this new industry might have on Norwegian society and how to steer the development process accordingly. As discussed earlier, this effort was embodied in a visionary document, Parliamentary Report No. 25 of 1973-1974 from the Ministry of Finance,²⁶ which among other things illustrated the unusually high capacity of the Norwegian civil service. Translating the key qualitative observations of Parliamentary Report No. 25 into tangible petroleum policy, however, was challenging. Different political parties became attached to different petroleum extraction “targets” that were connected in theory to optimal revenue goals. The reality is that government had very little control over revenue, due to fluctuations in the oil price, and not a great deal more over petroleum production. Exploration block allocations could be controlled, but not the eventual production that would flow from them, and Statoil was never really used as an instrument to restrict production rates from developed fields. Furthermore, it was impossible to truly know in advance the actual absorptive capacity of the economy (Al-Kasim 2006). All of these real uncertainties translated into policy that was by necessity somewhat adaptive and ad hoc. Indeed, one of the fundamental strengths of Norwegian oil governance was precisely the combination of a thoughtful and comprehensive initial roadmap (exemplified by Parliamentary Report No. 25) with flexible subsequent policymaking against the background of a diverse political system.

Noreng (1980) and El Mallakh et al (1984) argue that hydrocarbon development in the 1970s turned out to be more cautious than optimal. A “countercyclical” program of domestic spending intended to subsidize and protect traditional industries combined with delays in petroleum revenues to push Norway to an extremely high level of debt by 1978 – over half of GNP, the highest debt ratio ever recorded in an OECD country to that point (Noreng 1980). In fact, the countercyclical policy degraded the competitiveness of Norwegian non-oil industry by shielding it from change and boosting wages and costs. Rising unemployment suggested that the true capacity of the economy to absorb petroleum revenues was higher than had been anticipated (El Mallakh 1984). Showing laudable pragmatism, Norway’s policymakers discarded the countercyclical policy in 1978 and accelerated petroleum

²⁶ The Ministry of Industry produced an analogous document, Report No. 30.

licensing. With the additional help of an increase in oil prices in 1979-1980, Norway's accounts were back in surplus by 1980. At the same time, these events highlighted the extent to which Norway had already become a hydrocarbon-dependent state by the 1980s (El Mallakh 1984), as illustrated in Figure 5.

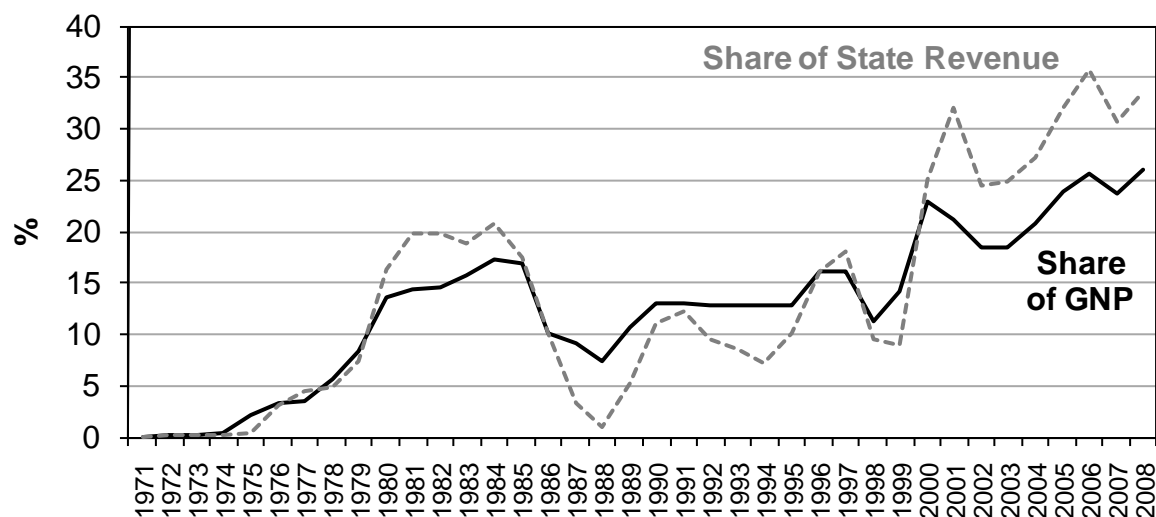


Figure 5 Oil and gas sector percentage contribution to GNP and state revenue. Source: Ministry of Petroleum and Energy / Norwegian Petroleum Directorate 2009.

The deep recession in Norway triggered by the oil price drop of 1986 further emphasized the country's exposure to petroleum-related economic fluctuations. (As Klaus Mohn points out, there has been substantial volatility not only in revenues but also in investments on the NCS.) In part as a vehicle to help smooth out these cycles, the government in 1990 created the Government Petroleum Fund (the name was later changed in 2006 to the Government Pension Fund – Global, referred to hereafter as the “Fund”). The net cash flow from petroleum activities each year accrues directly to the Fund, with any non-oil budget deficit plugged by a transfer from the fund. To avoid “Dutch Disease,” in which natural resource revenues cause inflation, affect exchange rates, and make domestic industry uncompetitive, the Fund's capital is invested outside of Norway (as suggested many years before in Parliamentary Report No. 25).

In essence, Norway's Fund serves both as a stabilization fund, designed to smooth economic cycles and insulate government budgets from oil revenue volatility, and as a savings fund, to build up wealth that will support the population even after petroleum resources have been depleted (Davis et al

2003; Skancke 2003). These Fund goals were considered to argue for a cautious and measured use of petroleum revenues. The fiscal “Action Rule” was established that the non-oil budget deficit to be covered each year by an injection from the Fund should not exceed the annual real rate of return on the Fund capital. This real rate of return is typically estimated to be 4% as a long-term guideline, although the Action Rule is not meant to preclude smaller or larger transfers in a given year as needed to respond to economic cycles. Soaring Fund capital (Figure 6) and a humming Norwegian economy enabled the 4% benchmark to be easily met in recent years (Figure 7), although expansionary fiscal policy was planned in 2009 to counter the effects of the worldwide financial crisis.

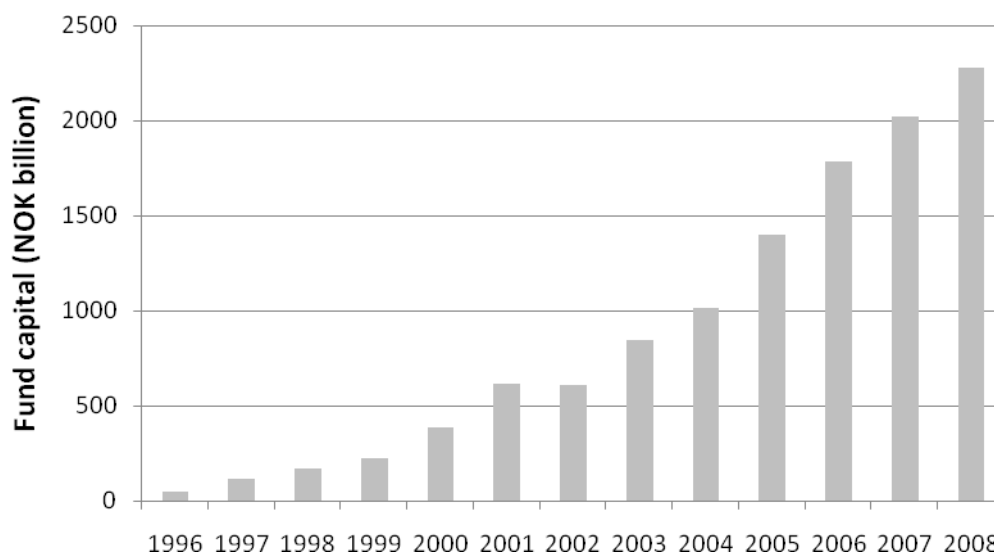


Figure 6 Market value of Government Pension Fund – Global (before 2006, was Government Petroleum Fund), NOK billion. Source: Norges Bank.

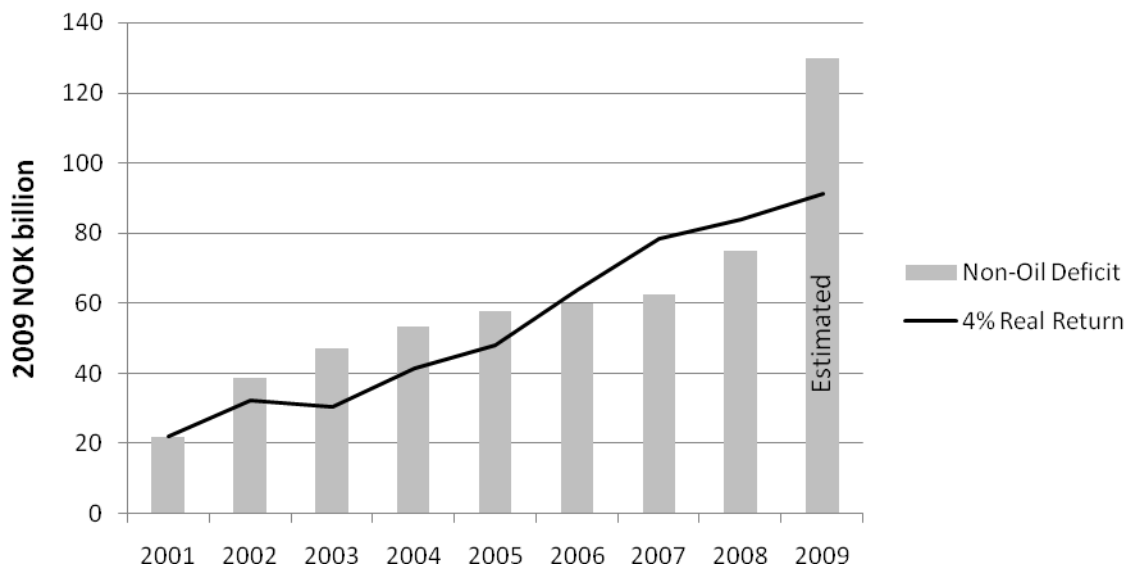


Figure 7 Degree of success in achieving Norway’s “Action Rule” that the non-oil deficit should be less than the real return (typically estimated at 4%) on the Government Pension Fund – Global over the long term. Source: Ministry of Finance, Revised National Budget 2009.

Røed Larsen (2006) argues that policy mechanisms like the Fund and the Action Rule—in combination with other factors like transparency, media scrutiny, and rule of law—have been helpful in preventing rent seeking and thus maintaining fiscal restraint in Norway’s spending of petroleum revenues. Nevertheless, the question still remains as to how Norway has been able to hold together the political consensus around prudence in revenue management, as politicians could presumably win election by promising immediate benefits from increased spending. Røed Larsen implicitly suggests that the relative lack of public visibility of petroleum revenues in past years might have played some role. Several of our interviewees concurred with this view, arguing that the public was only distantly aware of the massive money generator offshore until massive budget surpluses surfaced in the late 1990s (PESD Interviews). Røed Larsen goes on to express concern that the political will to restrain spending may be eroding in the face of today’s highly visible Fund balances, which give the popular impression of unbounded national wealth (Røed Larsen 2006).²⁷ Indeed, at the time of this writing, the populist Progress Party had been steadily gaining traction in the polls in part by promising to use more oil and gas money to improve Norway’s infrastructure.

²⁷ One government official expressed to us his personal view that the scale of the Norway’s petroleum wealth has led to high expectations for services, and in turn contributed to more frequent changes of government when politicians fail to deliver to their citizens’ satisfaction (PESD Interviews).

4. State-NOC Relations

The key to understanding Statoil's behavior is understanding its relationship with the Norwegian state. That relationship has existed in two main modes, with an inflection point between them in the mid 1980s. All through the 1970s, the relationship was a highly political struggle for control, with Statoil CEO Arve Johnsen lobbying aggressively for advantages and the bureaucracy trying, with partial success, to check Statoil's rising power. The tide began to turn in the early 1980s, with the political parties (led by the conservatives) and bureaucracy collectively driving measures to contain Statoil by taming its cash flow and removing its licensing advantages. The installation of Harald Norvik in the top post of Statoil in 1988 ushered in a new era of corporate normalization for Statoil and increasingly arm's-length formal relations with the government.²⁸ This shift was driven in large part by the increasingly evident need for Statoil to unshackle itself from Norway and become commercially competitive abroad in the face of maturing Norwegian resources. At the same time, recent trends—including events surrounding the merger with Norsk Hydro's oil and gas division—have illustrated how difficult it is for Statoil to fully transcend its strong ties to Norway.

Petroleum policymakers and regulators in the government had two principal challenges from 1972 onwards: controlling Statoil and controlling the other players in the oil sector. The latter task proved easier than the former. As soon as Statoil was formed, it immediately began to press its advantage in the petroleum and political arenas. Founding Statoil CEO Arve Johnsen was formerly a deputy minister in the Labour party, and first chairman Jens Christian Hauge was also a very powerful and prominent Labour figure. Johnsen was a brilliant political tactician who tirelessly pushed claims to the best acreage and the most beneficial terms for Statoil in license groups. With strong early support from Labour and the Ministry of Industry, Statoil was able to increase its carried interest in new exploration blocks from 35% at the time of its founding to 50% by the time of the licensing round in 1974, with an additional "sliding scale" provision for Statoil to claim an additional share of up to 30% after a commercial discovery had been made (Claes 2002). Thus, in effect, Johnsen created an

²⁸ Relative to many other countries, of course, Norway had rather arm's-length formal interactions with its NOC from the outset. That it still had a difficult time keeping the NOC from becoming a "state within a state" shows the extent of the challenge facing governing institutions in oil-rich states.

exploration regime that concentrated investment and risk from E&P activities on the foreign players who obtained exploration blocks while appropriating a large (and growing) share of the benefit from those activities for Statoil. Johnsen effectively curried support in Parliament by appealing to regional and popular constituencies. In addition to leveraging direct links to politicians, Johnsen was skillful throughout his tenure as CEO at developing a base of political support among other Norwegian industries by contracting out services – flights, rigs, shipping – where possible rather than supplying them in-house, even when Statoil could have afforded to do so (PESD Interviews).

The Ministry of Industry (and later the Ministry of Petroleum and Energy) had to walk the fine line of both supporting Statoil and containing it. Early Ministry officials in petroleum were aware of the potential for an NOC to become a “state within a state,” and they were determined to retain the upper hand in the relationship. An early test was presented by Statoil Chairman Hauge, who by 1974 was felt by officials within the Ministry to be meddling inappropriately in the political realm. Despite Hauge’s being a larger-than-life figure – a Norwegian resistance leader during World War II and the Minister of Defense in the Labour government elected just after the war – the Ministry held firm and forced him to resign,²⁹ appointing a new chairman³⁰ and replacing the entire board.³¹

The Norwegian Petroleum Directorate, which started with few resources and limited knowledge, had to fight to find its role in the sector – neither Statoil nor the Ministry itself were initially all that receptive to its efforts. In addition to cajoling the IOCs and a grudging Statoil to share data and expertise,³² the NPD increased its knowledge and capability through its own fledgling technical efforts, for example seismic surveying (Al-Kasim 2006). A key step to building capability was the ability of NPD leadership to obtain from the Ministry a separate and more generous salary structure for the NPD, which with its technical orientation was often competing directly with private industry for talent (PESD Interviews).

²⁹ When informed that the Minister planned to replace him, he was reported as saying, “I believe it will be easier to find a new Minister than to find a new Chairman of Statoil.” (Hanish and Nerheim 1992)

³⁰ The new chairman was Finn Lied, who had been the Minister of Industry proposing the establishment of Statoil under Bratteli.

³¹ The stated goal was the creation of a board that was more “politically diverse.”

³² Politicians who had imagined that a government company would strengthen the hand of government regulators by readily sharing its expertise (Dam 1976 p64) proved to be mistaken.

Box 1 A Note on “Separation of Functions” and the Norwegian Petroleum Directorate

Since the Norwegian Petroleum Directorate formally reported to the Ministry, it was initially felt necessary to have an independent board oversee the directorate to guarantee its independence from politics. In time, however, this board was judged to be superfluous, and in 1991 it was disbanded. Interestingly, therefore, while Norway originated and is most strongly associated with the idea of “separation of functions” in oil administration, its formal separation of functions—at least as far as policymaking and regulation are concerned—has not been complete. What ultimately protected the NPD from undue interference was the growing dependence of the Ministry on it for critical technical services and advice. (One early Ministry official said that the NPD tended to be viewed within the Ministry as its own technical department.) Any actions that would have severely disrupted this function would have been detrimental to both organizations (PESD Interviews). This illustrates the larger point that whether separation of functions is achieved in practice—as a result of mutual dependence or for any other reason—is more significant for governance than whether it is prescribed formally. Either formal or practical separation can occur in the absence of the other. Development institutions have sometimes advocated “pure” formal separation of functions—for example, in the oil sectors of Latin American countries—but the reality is that following such prescriptions has not always assured non-interference between different government players in practice (PESD Interviews).

By the early 1980s, with Norwegian control over petroleum well-established but the government’s control over Statoil still dubious despite the best efforts of the Ministry and NPD, a larger chorus of voices was coming together to argue that Statoil needed to be further constrained. The group of concerned parties unsurprisingly included IOCs, who argued that Statoil’s special preferences and effective veto power on field development due to its minimum 50% share in all the license groups was making the Norwegian operating environment unattractive (PESD Interviews). Officials within the Ministry itself were also reaching the conclusion that the government’s formal separation of political and commercial roles needed to be strengthened in practice.³³ With the change to a conservative government in 1981, the heated debate over the subject started to move towards real

³³ Two different interviewees who were Ministry officials in the years soon after Statoil’s formation suggested that the Ministry at the time sometimes took advantage of its ability to informally call Statoil and signal its desires rather than exposing itself to accountability by using the formal, transparent process of a General Assembly to give instructions to the company as its shareholder. It could be politically convenient, for example, to have Statoil being seen as the entity blocking development of a certain field rather than the Ministry.

action; at this point, Labour realized that change was inevitable and came to the table to seek a compromise solution.

The result of the negotiations, implemented as of January 1985, was that Statoil's balance sheet was split into two, with more than half of Statoil's interests in oil and gas fields, pipelines, and other facilities transferred to the newly-created State's Direct Financial Interest (SDFI) in petroleum.³⁴ (These reforms were widely referred to as Statoil's "wing clipping.") All revenues from SDFI shares would now be channeled directly to the state, dampening Statoil's cash flow.³⁵ Statoil was to continue managing the government's SDFI interests in oil and gas, so there was no direct change in operational structure. However, the company lost its ability to vote the government's shares in a license group, which, combined with some modifications to the licensing rules, eliminated its veto power over field decisions. (With the support of Parliament, the Minister could still in his role as "the General Assembly" instruct Statoil to vote all of the government's shares in a certain way, so Norway retained its control of hydrocarbon development more broadly.) Statoil lost its right to a carried interest in future concessions.

The final nail in the coffin of Statoil's period as an overt political player was the Mongstad debacle, which seemed to expose indiscipline, hubris and excessive power within Statoil. (The former Conservative prime minister in the government which had originally approved the project, Kåre Willoch, said that Statoil's influence in parliament was so strong that no government would have stopped the project (The Economist 10 Oct 1987).) Recriminations over Mongstad led to Johnsen's resignation in 1988. While the Mongstad debacle provided the immediate pretext for the change, some parties involved in the process said that replacing Johnsen had already been identified by key policymakers as a necessary step towards increasing state control over the company (PESD Interviews). Various interviewees suggested that Johnsen's brilliance, energy, and political savvy were crucial to getting Statoil established but ultimately became an obstacle to the company's further development.

³⁴ Although the SDFI reforms were implemented over Statoil's strong objections, oil and gas consultant (and former Statoil executive) Willy Olsen argues that the change ultimately was a well-timed boon to Statoil, whose heavy portfolio of investments from the early 1980s would have weighed it down severely in the low-oil price environment that followed had a large share of the burden not been shifted to SDFI (PESD Interviews).

³⁵ At the same time, negotiators of the compromise that resulted in SDFI were mindful not to cripple Statoil – for example, the company was allowed to retain its 50% equity interest in the productive Statfjord field, which at the time was a major source of cash for the company. The state took larger shares of fields like Gullfaks and Troll that had significant long-term potential (PESD Interviews).

Whereas Statoil's strategy under Johnsen relied on playing the domestic political scene for advantage, the company's strategy starting with Norvik and continuing thereafter aimed increasingly at developing a more arm's-length relationship with the Norwegian state. Several principal factors were behind this shift. First, in a general sense, Norvik and his top managers recognized that the company's long-term survival depended on being able to compete effectively abroad, since Norwegian domestic resources were finite. Second, they believed that a stronger sense of employee identification with the company rather than with the state would improve performance. Third, they had come to feel that the close links to the state which had been useful in establishing the company were now limiting its freedom of action in a procedural sense (for example, through the inability to pursue equity-based acquisitions due to 100% state ownership). Fourth, with the Norwegian government now more confident of its ability to manage oil operations and revenues than it had been initially, a window had opened to allow Statoil further formal separation from the state than would have been politically possible in the 1970s. The means through which Statoil's leadership sought to evolve beyond being an arm of the Norwegian state were the development of a stronger corporate culture,³⁶ diversification of operations abroad (which as an additional benefit would benchmark and improve performance by exposing Statoil to international competition), and the increased deployment of formal techniques of corporate governance.

Norvik sought significant internationalization of upstream operations as one key strategy for creating more breathing room between Statoil and the Norwegian state.³⁷ There were three main options for Statoil: independently identify and develop positions abroad based on Statoil's geological knowledge; buy international assets from other players while also developing independent projects; or seek an experienced international partner who could share knowledge and investment risk and generally accelerate Statoil's efforts to cut its teeth internationally. After discussions with the Board, Norvik pursued the third route as offering the fastest and lowest-risk path to international operations.

³⁶ Statoil after the Mongstad affair was particularly fractious and demoralized; Norvik began to build it back up through an aggressive program of cultural change. Managers were removed and new personnel (including Swedes and Danes who had entered the company through its downstream acquisitions) put in positions of authority. Written materials were put together to express Statoil's vision and principles, and an intensive series of town hall meetings within the company in 1989 and 1990 built cohesiveness while emphasizing the need for change.

³⁷ As Willy Olsen points out, Statoil's had pursued a few international activities prior to Norvik, including in Asia (China, Malaysia, and Thailand) and Europe (the UK and Denmark). These failed to take off for a variety of reasons. In an effort to improve Statoil's financial condition in the wake of the Mongstad cost overruns, Norvik in fact sold off some international ventures soon after he became CEO (PESD Interviews).

He unsuccessfully courted Shell³⁸ before a partnership with (then struggling) BP developed serendipitously through contacts with BP executive and later CEO David Simon. The addition of BP as a credible, experienced partner made it much easier for Statoil to gain approval from the Ministry for the internationalization push (PESD Interviews). Conversely, Statoil's NOC status (which made it a complementary partner for BP) and close connection to the Norwegian government probably were advantages in helping convince BP to enter into the alliance.³⁹

The Statoil-BP Alliance, which ran from 1990 to 1999, was unambiguously successful in allowing Statoil to rapidly expand onto the world stage. Together with BP, Statoil went into upstream E&P projects in Kazakhstan, Azerbaijan, Vietnam, China, Angola, and Nigeria, although Statoil was the operator only of the Nigerian venture. Statoil later sold its assets in Kazakhstan and Vietnam, but its operations in Angola and Azerbaijan remain a mainstay for Statoil abroad, and the company's presence in Nigeria is gradually expanding.

Important benefits from the alliance beyond access to acreage included growth in Statoil's confidence to operate internationally as well as the continued refinement of a commercial culture that came from constantly rubbing elbows with an experienced global IOC. And although it was already somewhat exposed to competition on the NCS, international operations gave Statoil the first understanding of what it meant to be truly on a level playing field with the world's international majors.

A second important autonomy-seeking strategy initiated under Norvik was to put in place more formal corporate governance structures, principally by partially privatizing through a share offering on a major stock exchange. On the one hand, Statoil by the late 1990s was already a commercially-oriented company, and the state in general did not interfere significantly in operational decisions. At the same time, exposure in the international arena increasingly convinced Norvik and other executives at Statoil that full state ownership was holding Statoil back in more subtle ways. Listing on a stock

³⁸ Statoil had existing close ties with Shell, but that company was already far-flung in its operations and did not have a tradition of forming strategic alliances (Lerøen 2002).

³⁹ One particular benefit that BP apparently hoped to gain through the relationship was access to Norwegian natural gas, despite Harald Norvik's insistence that the Norwegian government was *not* likely to be amenable to this (PESD Interviews). On balance, the alliance probably turned out to be less significant for BP than for Statoil, although likely still a net positive. Despite never achieving its goal of gaining access to Norwegian natural gas through the alliance, BP was able to share with Statoil both the significant risks of the joint international exploration effort and the costs of jointly-conducted R&D work.

exchange could provide full and frequent benchmarking for the company and thus aid in instilling discipline, enhancing management control, and focusing employees on common objectives, in the process furthering the development of a corporate identity distinct from Norway (PESD Interviews). There were also complaints that full state ownership limited Statoil's financial freedom of action relative to international competitors (Ramm 2009). Statoil's ability to rapidly mobilize investment for international projects could be compromised by the 6 months to a year it might take to obtain Parliamentary approval to access international capital markets (PESD Interviews). Mergers and acquisitions using equity were impossible as long as the state insisted on 100% ownership of the company. Finally, privatization offered Statoil the possibility of putting to rest persistent demands from Parliament for high dividend rates to boost revenue (PESD Interviews).

In the late 1990s, Norvik saw a window of opportunity to push partial privatization of Statoil, and he did, floating the idea at the 1999 Sandefjord Conference. This irked certain Ministry and government officials, who felt that Statoil was out of line to essentially ask for new management. At the same time, several specific factors caused the Labour government to be relatively open at the time to the possibility of partial privatization: oil prices were low, putting a premium on efficiency; the industry was restructuring around the world, with private ownership on the upswing; and the NCS was nearing its peak in oil production (PESD Interviews). More generally, having adapted over time to being a major oil producing state (and having put in place fiscal policies to preserve's the country's wealth when hydrocarbon resources began declining in the future), Norway was by this point able to relax its initial concern about maintaining complete control over oil operations.

The main formal effect of partial privatization on the NOC-government relationship was to place the government on an equal footing with minority shareholders.⁴⁰ In addition, Statoil's IPO prompted several other changes in organizational relationships to satisfy the corporate governance requirements of stock exchanges and EU rules,⁴¹ as well as the general Norwegian preoccupation with proper delineation of roles among government entities. Among the most significant changes was the

⁴⁰ Since privatization, direct dialogue between the Ministry and Statoil on commercial issues has been prohibited so as not to provide material information to one shareholder to the exclusion of others. Meetings with the Ministry of Petroleum and Energy are programmed to be exactly the same as meetings with other investors, down to the particular slides that are shown (PESD Interviews).

⁴¹ While Norway rejected entry into the European Community and European Union in referendums in 1972 and 1994, respectively, it did become party to the Agreement on the European Economic Area in 1994, which generally requires it to follow the economic rules of the EU (see http://ec.europa.eu/external_relations/norway/index_en.htm).

creation of a 100%-state-owned, non-operating company—Petoro—to be steward of the state's SDFI assets in oil and gas. (Maximizing the value of these assets for the government was previously the responsibility of a dedicated group within Statoil, but the government felt that continuing this arrangement would be incompatible with its new formal relationship with Statoil following privatization.) Petoro was given no independent income; all of its operating funds came directly from the state budget.⁴²

Not all of the detailed arrangements associated with partial privatization were to Statoil's liking, demonstrating that the government (principally through the Ministry of Petroleum and Energy) maintained some degree of control over the process. The company proposed that SDFI be merged back into Statoil at the time of privatization (Ramm 2009). As it turned out, Statoil was only allowed to buy back selected SDFI assets that fortified its natural gas portfolio in order to make it more attractive to potential investors. In addition, Norway shifted control over transmission of natural gas from Statoil to a newly-created company, Gassco,⁴³ in order to establish a framework it viewed as compatible with EU competition rules. Statoil kept the responsibility for marketing and selling the oil and gas owned by the state through the SDFI, with Petoro looking over its shoulder to make sure the selling price was correct.

Government officials and Statoil personnel themselves have usually (though not always) been quite conscientious in living up to the formal obligations of their arm's-length relationship as majority shareholder and publicly-traded company. Two recent examples of government-Statoil interactions illustrate the extent of their formal separation. In the first case, the Ministry of Petroleum and Energy on the advice of the NPD ruled in October 2007 to block further development of natural gas by Statoil from the Troll field on the grounds that such activity would likely harm the ultimate oil recovery from the field (Petroleum Economist 1 Dec 2007). Statoil was highly displeased based on commercial considerations⁴⁴ but was forced to accede to the Ministry's dictates.⁴⁵

⁴² In a way, the creation of Petoro – a fully state-owned, non-operating company – at the time of Statoil's IPO paralleled an idea for a non-operating NOC that the civil service and Borten government had originally pushed in the early 1970s before Bratteli became prime minister (PESD Interviews).

⁴³ Physical ownership of pipelines on the NCS (as opposed to control over transmission) was consolidated in 2003 into Gassled, a joint venture between all pipeline-owning oil and gas companies in which each company received a share in Gassled proportional to its share of pipeline ownership on the NCS.

⁴⁴ One observer suggests that divergent prior views between Statoil and Hydro may have played a role in how this situation played out and on what time scale. Because Hydro had previously backed the NPD's position, the interviewee suggests, the government may have been anxious to act on Troll before the legacy Hydro elements lost too much power within the

A second recent instance of state-NOC conflict, which might on the surface appear to indicate sectoral dysfunction, in fact provides among the clearest evidence that the government and Statoil are formally isolated from each other. The Norwegian government in April 2008 filed suit against Statoil for recovery of NOK 11 billion (~\$2 billion) it believes it is owed by the company in connection with expansion of the Kårstø gas processing terminal between 1997 and 2000 (Platts Oilgram News 1 May 2008). As one Ministry official explains it, Statoil managers need to be diligent about not giving minority shareholders the impression they are paying off their main shareholder. For its part, the government is answerable to the State Auditor, and thus has its own obligation not to back down if it feels that it has been shortchanged (PESD Interviews).

For all the success of Statoil and the government in establishing and adhering to corporate governance frameworks that treat the company the same as any international operator, there are a number of respects in which Statoil and Norway remain as stubbornly conjoined as ever. First, the size of Statoil's Norwegian activities, and its continued difficulty in generating substantial cash flow internationally, keep its focus inescapably on Norway. Second, personal connections within Norwegian politics still give Statoil a special ability to influence significant decisions that affect it, even though it no longer overtly throws its weight around as it did during the Johnsen era. Third, a company that looms as large in a small country as Statoil does cannot escape the influence in return of politics on its own actions, even in the absence of direct government intervention.

The sheer scale of Statoil's petroleum operations on the NCS, particularly since the merger with Norsk Hydro's petroleum division in 2007, is one factor that complicates company efforts to behave as a fully global operator. (As one reflection of this, at the time of this writing there still did not yet exist a completely unified system of ranking domestic and international projects within Statoil (PESD Interviews), although there are methods of cross-comparing investments.⁴⁵) Statoil's international production currently accounts for 24% of total equity oil and gas production (see Figure 12) but only

merged company, perhaps making it more likely that the company would contest the government's decision.

⁴⁵ One long-time participant in the Norwegian petroleum sector cited this case as an example of residual hubris on the part of Statoil. In his opinion, the likelihood that the NPD and Ministry would block the development was well-known, but Statoil persisted anyway, thinking it could somehow strong-arm the deal through. Overall, though, he says that the company is behaving more and more like an IOC as time goes on, and that it tries to pull political power plays less and less often (PESD Interviews).

⁴⁶ The return requirement for Norwegian investments is slightly lower than for international ones due to the different tax regimes to which they are exposed (PESD Interviews).

7% of net operating income, compared with 84% of net operating income that comes from domestic upstream activities. The company's massive production activities on the NCS (see Figures 2 and 3) provide the basic cash flow to fuel its business. This cash flow is on the one hand an advantage for international expansion as it can help to fund mergers and acquisitions activity—for example, Statoil's 2008 acquisition of a significant stake in the Marcellus shale gas project in the US. At the same time, it quite understandably keeps the company's center of attention squarely on Norway. (The Ministry of Petroleum and Energy is eager to diversify production operatorship on the NCS, but Statoil holds significant legacy assets and often ends up being the most compelling license applicant for new blocks, despite somewhat successful efforts by the Ministry since 2002 to involve more players in exploration.⁴⁷)

While Statoil's merger with Norsk Hydro's petroleum operations created some potential advantages for expansion abroad, it also illustrated (and in a sense reinforced) Statoil's ties to Norway. One of the rationales for the merger was that the financial resources and human talents of a merged Norwegian champion would enhance its international prospects⁴⁸. This argument has some merit, especially given the deep pockets required to pursue international M&A or pay signature bonuses to win contracts. At the same time, some commentators have questioned why the company did not pursue international assets more directly. The government sold only 18.3% of its stake Statoil in the initial IPO in 2001, with the idea that it could later sell off more to support a strategic alliance or merger that would give Statoil additional international assets. However, Statoil never availed itself of this option, instead pursuing an abortive merger with Norsk Hydro in late 2003 / early 2004 before finally consummating a deal in 2007. As Claes pointed out well before either attempt (Claes 2002), an arrangement with Hydro directly offered Statoil few international assets compared with a deal involving an international company. Ramm (2009) makes a similar point in questioning the wisdom of

⁴⁷ Statoil has deeper knowledge of the region's geology and operational challenges than anyone else from having had a dominant position there for so long. The NCS is also of course far more material to Statoil's financial success than to that of any IOC majors, leading it to devote significant resources to opportunities where the majors have less interest. For these reasons, the Ministry can find itself in the position of choosing Statoil as the desired operator for a new area even though, all other things being equal, it would prefer more diversity. Some Ministry officials speculate that Statoil actually held back in its operatorship applications in the 20th license round, perhaps sensitive to perceptions that it had become excessively dominant on the NCS since the merger. In fact, there was one case in this license round in which the Ministry asked Statoil to accept operatorship on a block for which no operatorship applications were received.

⁴⁸ One oft-employed justification for the merger with Norsk Hydro was that it would resolve confusion that could arise among resource-owning countries when they encountered two Norwegian companies with state backing competing against each other; the bidding for participation in Russia's Shtokman field was invariably cited as the principal example of this problem.

the 2007 merger with Hydro as a route to international expansion. Such arguments imply that Statoil was preoccupied with swallowing up its Norwegian rival rather than pursuing the best arrangement for international growth. Other commentators, however, think that Statoil was genuinely limited in its other options, including by majority state ownership and domestic political considerations standing in the way of a deal with a major international player (PESD Interviews). What is not in dispute is that the merger with Hydro significantly expanded Statoil's domestic portfolio.

The merger also revealed the extent to which personal and political connections within Norway's tight-knit governing circles can remain a significant factor in oil-related decision making. Having agreed on the merger among themselves, Statoil CEO Helge Lund and Norsk Hydro CEO Eivind Reiten directly cleared the deal with Prime Minister Jens Stoltenberg and a very small group of civil servants (those in the Ministry of Petroleum and Energy and Ministry of Industry and Trade charged with the government's ownership of Statoil and Hydro, respectively). Stoltenberg then promptly announced the merger in public and gave it his unconditional endorsement. Neither the civil servants charged with regulating oil and gas nor the Norwegian Competition Authority⁴⁹ were seriously consulted. Government authorities did go through the prescribed formal review process after Stoltenberg's announcement, but by this point his ringing endorsement of the deal had turned it into essentially a foregone conclusion.⁵⁰ By only consulting ministry officials in their ownership capacity and pre-empting the input of regulators, the process certainly did not fulfill the ideal of separation of regulatory and commercial functions embodied by the formal governance structures in the sector.⁵¹

The reverse side of Statoil's ability to influence government decisions as a "big fish in a small pond" is the way in which its own operations can be negatively influenced by Norwegian politics.

⁴⁹ The argument was made that the Competition Authority had no jurisdiction as the matter had been referred to the EU to review its implications for competition, but the Norwegian government could in fact have involved the Competition Authority had it chosen to do so (PESD Interviews). The EU authorities for their part were primarily concerned with any ability of the merged company to exert market power in oil and gas marketing outside of Norway, not on the possible effects on competition within upstream oil and gas operations on the Norwegian Continental Shelf itself.

⁵⁰ The merger certainly had some legitimate arguments in its favor, and it might have been inevitable if Hydro's hydrocarbon prospects had continued to dwindle, especially in a political environment likely hostile to foreign ownership of Hydro's oil and gas division (or maybe even to its being a stand-alone company vulnerable to outside investors). Nevertheless, the short-circuiting of debate about the merger prior to its approval—and the absence of any steps to reduce the NCS market share of the new company by forcing it to sell some assets—illustrated the still-formidable political influence of Statoil and Hydro in Norway, made virtually unstoppable when the two stood side-by-side.

⁵¹ As Ramm (2009) points out, the approval process for the division of Saga between Norsk Hydro and Statoil in 1999 had some of the same characteristics.

These influences can play out as: 1) direct government intervention in Statoil decisions for political reasons; 2) attempts by Statoil to please political constituencies that affect bad decisions; 3) actions by Statoil in response to government and public sentiment; and 4) political disapproval of Statoil actions that does not directly influence these actions but does create distractions for Statoil. It is important to note that these phenomena can be observed in connection with important companies in *any* country. However, Statoil's position as a major strategic player in a small country exacerbates the challenges they pose.

Fortunately for Statoil, the first type of influence—direct meddling by the government in Statoil operational decisions—is rare today, though not unheard-of (one arguable example occurred in 2008 when the Minister of Petroleum and Energy pressured Statoil to source power for an oil field from a politically influential area⁵²). Calibration of Statoil strategic decisions for political advantage has not been uncommon historically. An interviewee cited Statoil's location of a research center in Trondheim in the early 1990s as one example (PESD Interviews).

Statoil can feel a strong need to respond to implicit government and public pressure. Compensation decisions around the time of the merger were one example. A flurry of public attention to how Norsk Hydro executives had profited (entirely legally) from share options in the run-up to the merger led to new government guidelines on compensation for Norwegian partially- or fully-state-owned companies. These guidelines caused Statoil to shelve proposed employee stock incentive plans (PESD Interviews). The government's guidelines did not constitute a direct instruction to the Statoil board as a shareholder, but they nevertheless impacted the company's policies. Statoil's engagement in other countries may at times be affected by government and public pressure, although the exact impacts can be difficult to assess. Regulators and the press are certainly quick to seize upon any hint of malfeasance abroad.⁵³ For example, a 2003 bribery incident in Iran, which led to the departure of

⁵² Then Minister of Petroleum and Energy Åslaug Haga pressed on StatoilHydro a particular solution for electrification of the new Gjøa field – sourcing power from the island of Lutelandet in Fjaler – that played to political constituencies but was costlier than StatoilHydro's preferred alternative of bringing power from Mongstad. Though the Lutelandet option was supported by Parliament, it can be argued that the Minister did not follow the correct formal procedure of instructing Statoil as its majority shareholder, and in any case that the intervention did not represent proper stewardship of the company's interests. Ultimately a compromise allowed StatoilHydro to get its power from Mongstad but fund significant infrastructure construction on Lutelandet. (NRK 18 April 2008, available at http://www.nrk.no/nyheter/distrikt/nrk_sogn_og_fjordane/1.5422221; Aftenbladet.no 17 July 2008, available at <http://aftenbladet.no/energi/olje/article669738.ece>; Teknisk Ukeblad 9 September 2008, available at <http://www.tu.no/energi/article178275.ece>)

⁵³ One recent example was the 2007-2008 scandal over suspicious consulting contracts arranged by Saga in Libya in the late

Statoil CEO Olav Fjell, might have set back Statoil's efforts at the time to engage with Iranian national oil company NIOC (PESD Interviews).

Norwegian politics can generate a lot of sound and fury around Statoil activities even when it ultimately has no direct influence on decisions. Statoil's recent investments in oil sands in Canada have attracted particular ire from politicians and Norway's influential environmental movement. Some members of parliament have forcefully stated that Statoil should not be participating in such projects because of their potential climate change impacts. Such individual views have not yet led to any direct interference in Statoil's commercial choices on this matter—the Ministry of Petroleum and Energy voted down a May 2009 shareholder resolution that would have instructed Statoil not to invest in oil sands. (The Norwegian environmental movement has likely had a more significant effect on Statoil's operations in an indirect way by helping slow the pace at which the government opens new areas on the NCS for exploration.) At the same time, the political cacophony can be confusing to minority shareholders, who may not grasp the distinction between political figures speaking on behalf of the government as Statoil owner and speaking as private citizens. Statoil needs to devote significantly more time and resources to responding to political noise (including to manage staff morale) than its IOC brethren (PESD Interviews), in the process strengthening its ties to Norway even as it needs to focus more energy abroad.

As long as petroleum remains central to Norway's economy, it is difficult to see that the resonance of Statoil as a political issue will diminish significantly. The existence of a dominant NOC with majority state ownership can provide politicians with the satisfying illusion that they control the critical petroleum sector, even when their direct influence over the company's actions is in fact tightly circumscribed by governance rules. One irony is that the merger probably enhanced politicians' perceived control, as Norway's overall stake in NCS operations is now larger, while reducing the government's actual control by diminishing its regulatory leverage, especially its ability to stimulate competition. Nevertheless, the durable political attraction of this perceived sense of control is one reason why the state seems unlikely to significantly reduce its stake in Statoil in the near future.⁵⁴

1990s, which became Norsk Hydro's responsibility when it took over Saga in 1999 and were allegedly not disclosed by certain Hydro employees during the due diligence for the merger with Statoil.

⁵⁴ A two-thirds share grants a shareholder full positive control over company bylaws; a mere one-third share would be sufficient to allow the state to veto any company decision to ever move its headquarters out of Norway. One interviewee commented that a further reduction in the state's share of Statoil might not be as unlikely as the

5. Statoil's Performance and Strategy

Statoil can be assessed on the one hand as a domestic champion intended to serve broad purposes of Norwegian petroleum and economic development, and on the other hand as a profit-maximizing enterprise in competition with major IOCs and benefiting Norway principally through its tax and dividend payments. As the rest of this study has discussed, the emphasis in how the government sees the company has shifted over time from the former role to the latter role, although elements of both views are still present. Company strategy has shifted accordingly. In the 1970s and 1980s, Statoil took advantage of the government's emphasis on national control of petroleum and industrial development to push for privileged access to NCS resources and chances to "learn by doing" in early operatorship opportunities. As NCS resources began to mature and Norway relaxed into its status as a petroleum state, Statoil increasingly sought to assure its future by becoming competitive on the global stage. Apart from some efforts to leverage its NOC heritage at the margins, Statoil's strategy today appears quite similar to that of a major IOC, albeit one with an outsize domestic footprint.

We start this section by considering the degree to which Statoil has succeeded in becoming a competitive global player as measured by standard hydrocarbon and financial indicators. After that we turn our attention to Statoil's historical performance in the less-easily measured function of national champion—in particular, to the role the company has played in helping to develop Norwegian technological and industrial capability more generally. A theme of our observations is that there has been a trade-off at times between short-run economic efficiency and actions that have supported the development of the Norwegian oil sector and services industry over the longer term.

In the years following its IPO, Statoil's financial and market performance were strong. The company's net income and stock price climbed steadily through 2007 (Figure 8) alongside oil prices. The financial crisis and decreasing oil prices hit both in late 2008. Combined equity oil and gas production of Statoil in 2008 was 1.9 million boe per day.

conventional wisdom dictates if a conservative government were to come to power.

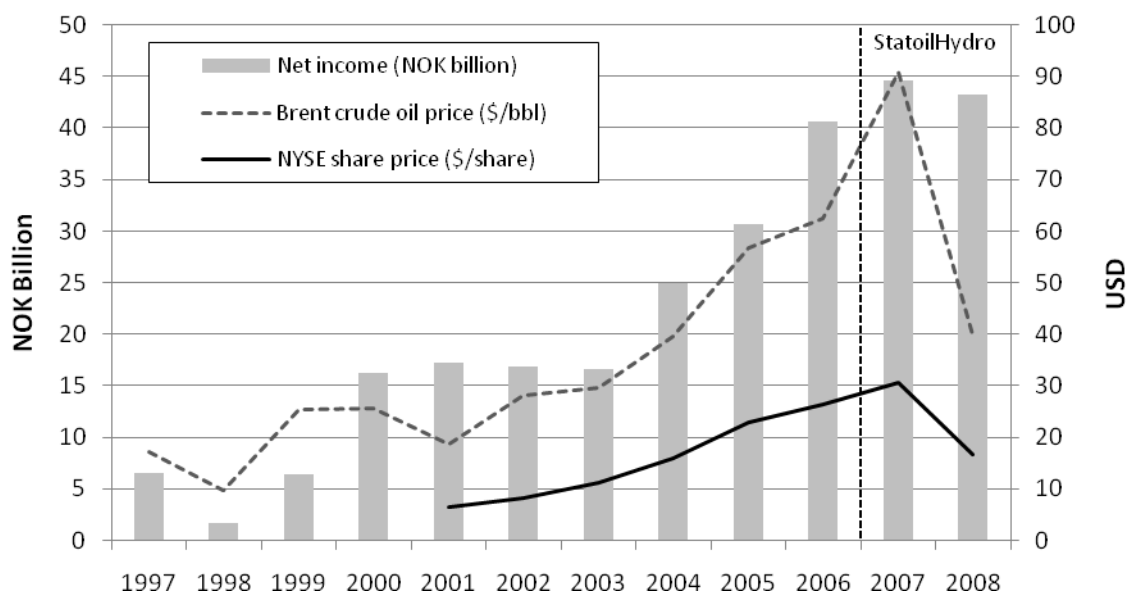


Figure 8 Statoil/StatoilHydro annual net income, compared against Brent crude oil spot price (December average) and Statoil NYSE share price (STO, as of December 31). (For comparison, BP net income in 2008 was equivalent to NOK 122 billion; ExxonMobil net income in 2008 was equivalent to NOK 255 billion.) Source: Statoil/StatoilHydro annual reports; BP annual report 2008; ExxonMobil annual report 2008; EIA; NYSE quotes.

However, Statoil as a company now faces maturing resources on its critical home turf of the NCS (Figure 4). The Norwegian Petroleum Directorate (2009) predicts that overall petroleum production on the NCS will remain steady until around 2020 before declining after that, with the share of gas production steadily increasing. Exploration success rates on the NCS have steadily improved over the years, and exploration activity has increased since 2004, but new petroleum discoveries have become progressively smaller (Norwegian Petroleum Directorate 2009). Larger discoveries may still be possible in large tracts of acreage—including parts of the Barents Sea and coastal areas of the Norwegian Sea—that have not yet been opened to exploration by the government in the face of environmental and fisheries opposition.

Mirroring these trends, Statoil's domestic output has reached a plateau, and oil production in particular is in decline (Figure 9). International production is generally increasing (Figure 10) but struggles to keep pace with falling output on the NCS. International reserves generation through exploration or acquisitions has so far been insufficient to counter the decline in NCS reserves, resulting in a steadily falling reserves-to-production ratio (Figure 11). Overall, both Statoil and Hydro struggled

on the exploration front leading up to the merger. Statoil's exploration results may be looking up of late with several recent discoveries on the NCS and a partner-operated deepwater find in Angola.

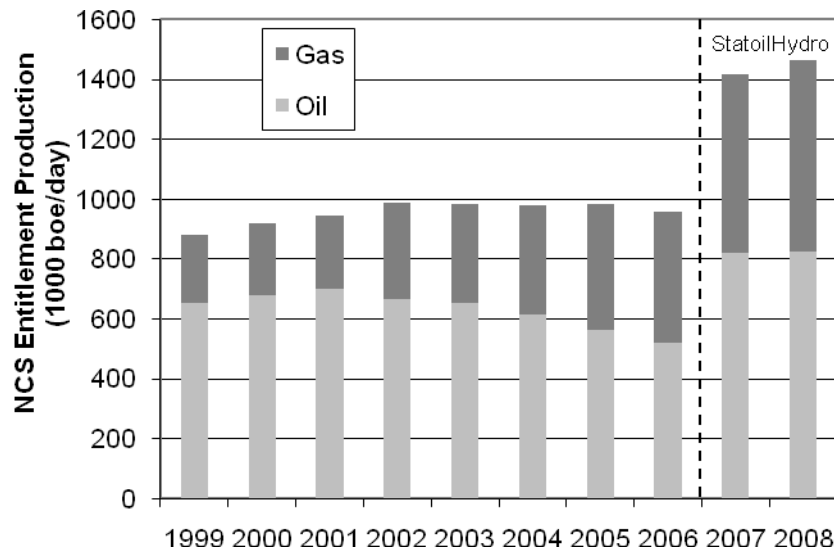


Figure 9 Statoil's domestic (NCS) hydrocarbon entitlement production by type. Source: Statoil/StatoilHydro annual reports.

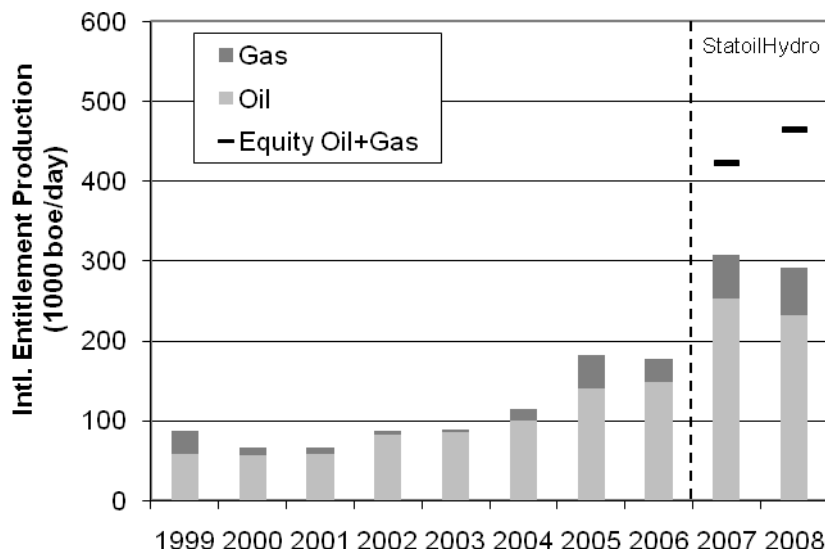


Figure 10 Statoil's international hydrocarbon entitlement production by type. Equity production data points (combined oil and gas) are also shown for StatoilHydro in 2007 and 2008. Source: Statoil/StatoilHydro annual reports.

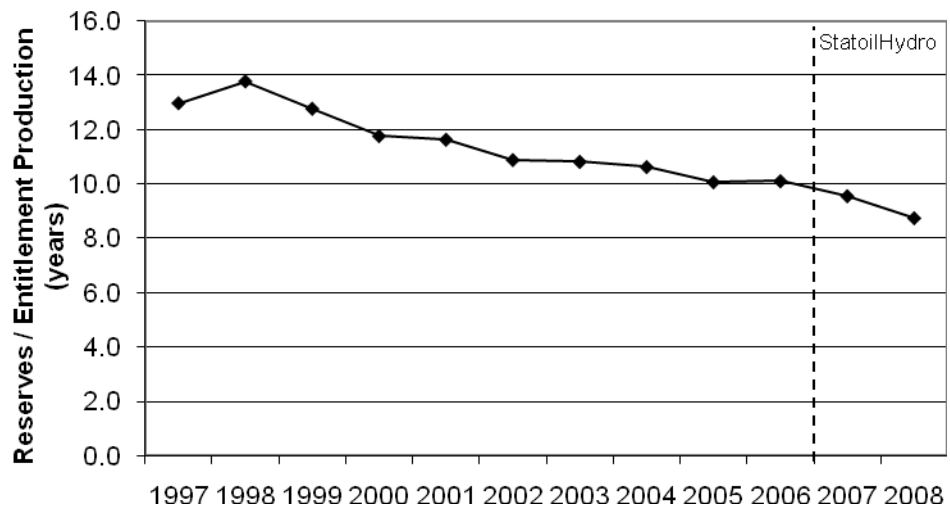
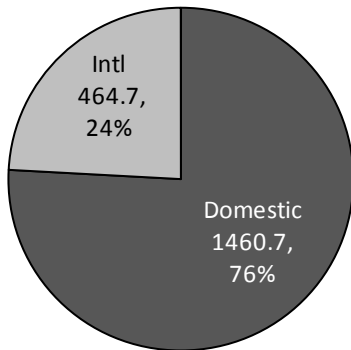
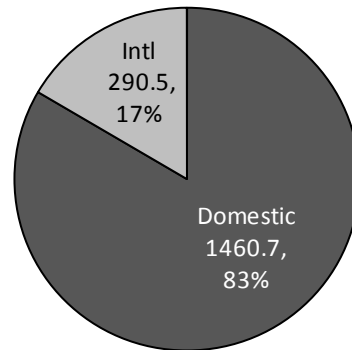


Figure 11 Statoil's reserves-to-production ratio (combined oil and gas, uses entitlement figures for production). Source: Statoil/StatoilHydro annual reports.

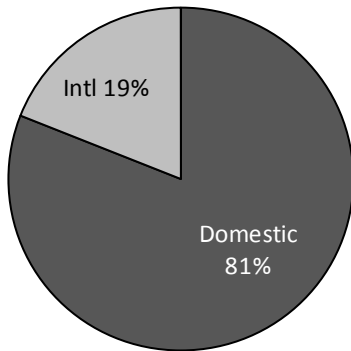
**Equity Production, 2008
(1000 boe/day)**



**Entitlement Production, 2008
(1000 boe/day)**



**Proved Reserves, 2008
(%)**



**Net Operating Income, 2008
(NOK billion)**

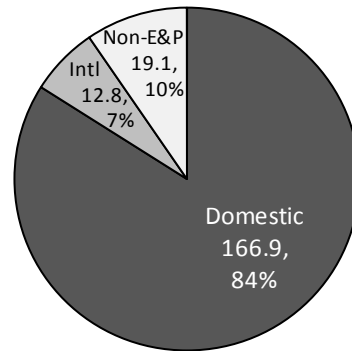


Figure 12 Relative contribution of domestic and international hydrocarbons to Statoil production, reserves, and net operating income. Source: StatoilHydro Annual Report 2008.

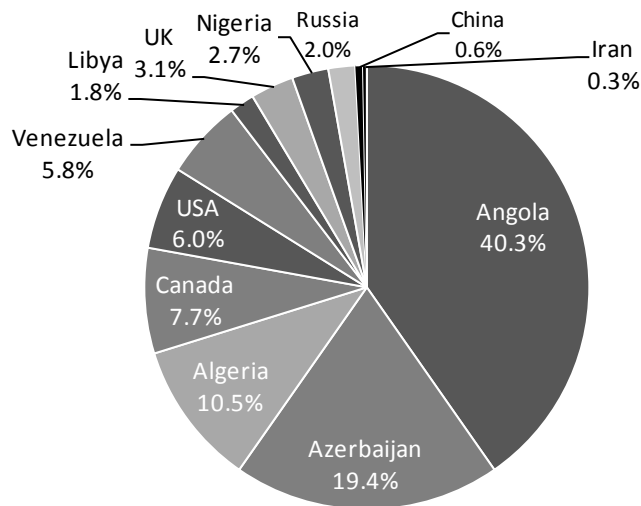


Figure 13 Sources of Statoil international equity production in 2008. Total international equity production was 464,300 barrels of oil equivalent per day. Source: StatoilHydro Annual Report 2008.

Given the finite (though still appreciable) remaining resource base of the NCS, Statoil's efforts to expand internationally take on particular urgency. In 2008, international equity production constituted 24% of Statoil's total production, although it was responsible for only 7% of net operating income compared with 84% of net operating income contributed by NCS production (Figure 12). Statoil's results in expanding international production over the last decade have been mixed. The majority of production still comes from operations in Angola and Azerbaijan that date from the BP alliance (Figure 13). At the same time, there are good prospects for growth in the coming years on the back of projects in deepwater Angola, the US Gulf of Mexico, Brazil, Canada, US onshore, the UK, and Nigeria (Wood Mackenzie 2010a).

Statoil's technological competence (see discussion later in this section) and formal autonomy from the government have enabled it to pursue an international growth strategy that looks remarkably like that of the major IOCs. Statoil attempts to compete in international frontiers that play to its strengths (for example, oil sands in Canada, shale gas in the US, heavy oil in Venezuela and Brazil, arctic offshore gas in Russia, deep water in the US Gulf of Mexico and Angola), while managing political relationships along the way to open acreage and keep it open. Since partial privatization, the company has become more coherent in trying to leverage its particular technological strengths to support international expansion. A number of the company's specialties have grown out of the

characteristic rigors of operations on the NCS, including its talents in deepwater technology (even though NCS resources themselves are no longer considered to be that deep), operations in harsh environments, and integration of complex value chains for natural gas. The company has also developed strong expertise over the years in enhanced oil recovery, which can be a selling point abroad as well as on the maturing NCS. A final area of perceived advantage, producing and refining heavy oil, which is key to the important Peregrino field development in Brazil, developed on the Hydro legacy side from experience with the Grane heavy oil field on the NCS and on the Statoil legacy side from the Sincor partnership in Venezuela which started in the late 1990s. New investments today are scrutinized more carefully against the company's core competencies than were past ones. For example, Statoil's re-entry into the Gulf of Mexico in 2005 through the purchase of Encana's deepwater assets was more carefully considered than its original foray into the Gulf of Mexico in shallow-water developments where it held less of a comparative advantage (PESD Interviews).

Even as it deploys an IOC-like strategy, Statoil has tried where possible to use its NOC heritage to gain a competitive edge abroad. In theory, it should have some advantages in convincing resource-rich governments that it would be a good partner. Statoil has historically shown more willingness than major IOCs to enter into the service contracts and other non-equity arrangements – for example in Iran, Iraq, and Russia – that are often preferred by host countries. Still unclear is the degree to which Statoil can gain access to international acreage by convincing host countries and their NOCs that Norway's successful experience and its own NOC heritage give it a unique ability to understand and help meet the development needs of these countries. According to Willy Olsen, Statoil has as part of this strategy engaged in efforts to strengthen and leverage its linkages to Sonatrach, NIOC, Pemex, Petrobras, PDVSA, and Saudi Aramco. However, even if this strategy proves successful in certain instances, it is a difficult one for Statoil to employ on a large scale,⁵⁵ especially as more resource-rich countries have moved to using auctions to allocate exploration blocks. Statoil's focus in recent years on acquisitions in the US, including the Encana purchase mentioned above and the 2008 acquisition of a stake in the Marcellus Shale, seem to suggest that it recognizes that strategic investment and project execution are

⁵⁵ A Statoil official said that finding situations and ways to take advantage of the company's heritage is "amazingly complicated; there are maybe 2 to 3 places in the world at one time where we can use [this strategy]." He cited Norsk Hydro's experience in Angola as an example of how to pursue this strategy, and also of its complexity and uncertain outcome. Hydro gained a privileged position through its offer to help NOC Sonangol develop operational expertise, which it did by pairing Hydro personnel with staff in Sonangol's development organization. In return, Hydro was given the ability to match competitor's bids and was granted joint operatorship of a supposedly "golden block" in Angola. However, the venture was ultimately not a commercial success, as the company drilled only dry wells. And when Norsk Hydro approached Nigeria with the same idea, it found no interest (PESD Interviews).

at least as important to its success abroad as efforts to gain preferential resource access by leveraging its NOC status.

Statoil's cost discipline seems to have improved in recent years. The logical benchmark for Statoil's cost performance is that of other international and Norwegian companies operating on the NCS – particularly, before 2007, Norsk Hydro. (Indeed, one of the problems in assessing Statoil's operating efficiency since the merger is the lack of the ideal benchmark formerly provided by Hydro.) As part of a social cost-benefit analysis (SCBA) of the effects of Statoil's partial privatization, Christian Wolf has done the most detailed analysis of this type (Wolf 2008). Wolf finds that Statoil's production costs (Figure 14) and finding and development costs on the NCS pre-IPO were comparable to or perhaps worse than Norsk Hydro, but that Statoil's relative performance improved in the run-up to the IPO and beyond. Wolf's analysis implies that Statoil's privatization (itself made possible by the government's willingness to enter into an increasingly arm's-length formal relationship with Statoil) made the company more efficient. Our interviews anecdotally support the finding that Statoil's partial privatization motivated some strategic decisions in the run-up to the IPO aimed at containing costs, including the sale of Statoil's assets in Kazakhstan, Vietnam, and the Gulf of Mexico (PESD Interviews). A drop in Statoil's international production costs around the time of the IPO is evident from Figure 15.

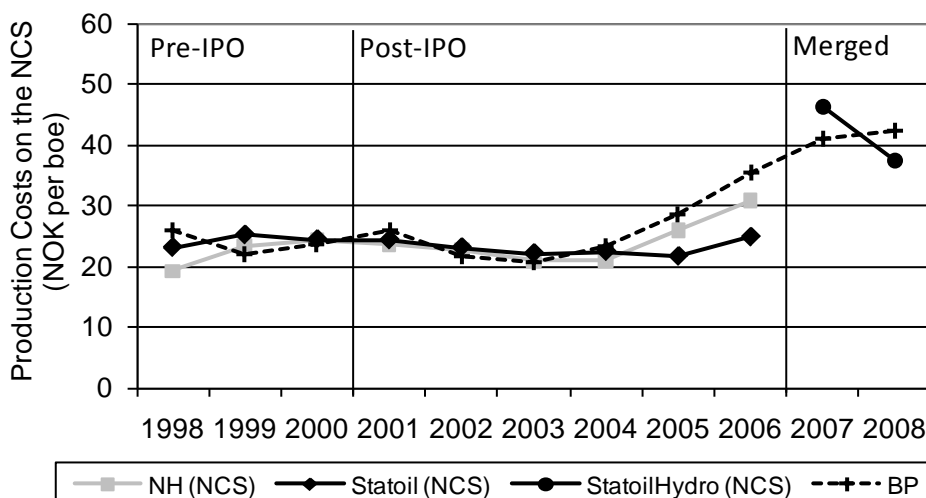


Figure 14 Production costs on the NCS: Statoil, Norsk Hydro (NH), and StatoilHydro, with BP global production cost as a benchmark. 2007 data for StatoilHydro includes some significant merger-related costs. Source: Wolf 2008, based on data from company SFAS 69 disclosures for Statoil and Norsk Hydro; StatoilHydro annual reports.

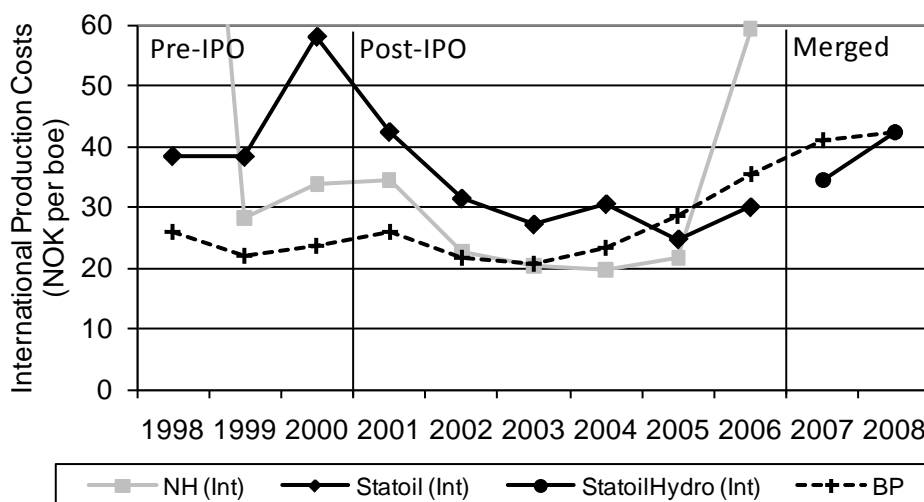


Figure 15 Production costs internationally: Statoil, Norsk Hydro (NH), and StatoilHydro, with BP global production cost as a benchmark. Source: Wolf 2008, based on data from company SFAS 69 disclosures for Statoil and Norsk Hydro; StatoilHydro annual reports.

We argue that the development of cutting edge technological capability has over most of Statoil's history been emphasized over cost minimization and the creation of a lean organization. These priorities reflected Statoil's role as a tool for achieving broader government goals for the sector

including intensive technology transfer to Norway, high employment, and maximum oil and gas recovery from fields on the NCS. A comparison between Statoil, Norsk Hydro, and Brazil's NOC Petrobras highlights how a company's relationship with the state can shape corporate culture. Norsk Hydro was a pre-existing industrial player that was not viewed as a government policy vehicle to the same degree as Statoil, although it did have strong political connections as well. With a long industrial culture that included exposure to the rigors of competition, Hydro was innovative on the NCS but also more focused on the bottom line than Statoil, leading it to be relatively more risk-averse (and prudent) in technology development. The development trajectory of Brazil's Petrobras, on the other hand, was more similar to that of Statoil. Both Petrobras and Statoil faced domestic resources that were difficult to exploit and took full advantage of their privileged positions as national champions to develop the technological capabilities needed to do so at low risk to themselves. With the advantage of full state backing, neither company developed into a particularly lean organization.

Government support of Statoil certainly helped accelerate its technology learning. One avenue through which the government directly contributed to Statoil's development of technical expertise was by supporting its push for early operatorship on several key fields. In the case of Gullfaks, the government granted Statoil a "golden block" in 1978, in the face of some grumbling by the international oil companies; this translated into the company's first production operatorship in 1981. The second critical support for Statoil of this type involved transferring operatorship of Statfjord from Mobil to Statoil in 1987.⁵⁶ This handover almost certainly occurred earlier than could have been justified on purely competitive grounds (PESD Interviews). For Statoil, there was no substitute for "learning by doing," and government support thus proved important in accelerating development of the company's technical competence, although at some expense in increased cost. Statoil was partnered with IOCs in almost all license groups, which provided both the opportunity to learn from IOCs and the advantage of mitigating risk.

The government arguably supported Statoil's innovative mentality and long-term outlook to an even greater degree by implicitly granting Statoil nearly full discretion over its cash flow combined with ready access to capital and a soft budget constraint (PESD Interviews). As a fully-state-backed enterprise, Statoil never really faced the threat of bankruptcy or takeover, and there were relatively

⁵⁶ A key later transfer of operatorship was the handover of the Troll gas field from Shell to Statoil in 1996 upon completion of field development.

limited repercussions to personnel (except perhaps at the CEO and Board level) in the event of failures. These conditions were ideal for encouraging risk-taking. Time and again, Statoil attempted projects that were massively ambitious in technology and scope. One result was fast-moving technology development. Statoil's notched pioneering successes, for example, in undersea pipeline development (notably, Statpipe), improved oil recovery (for example, on Gullfaks and Statfjord), subsea installations (for example, on Gullfaks and Norne), and CCS (Sleipner). A side effect of this prodigious appetite for technological risk, however, was costs and timetables that could on occasion spiral out of control. Statoil attracted fierce domestic criticism for several high-profile projects that ultimately pushed technological limits in challenging environments but along the way experienced problems leading to severe cost overruns. The principal examples were the Mongstad refinery in the 1980s, the Åsgard field in the 1990s, and the Snøhvit project in recent years.

It should be noted that cost overruns on the NCS pre-dated Statoil's operation of projects: the Ekofisk, Frigg, and Statfjord fields all ran into cost overrun problems in the 1970s (Al-Kasim 2006). These earlier overruns on IOC-operated projects were generally attributed to the pioneering character of the projects as the first forays into the challenging conditions of the North Sea as well as Norwegian local content preferences which pushed up costs – the so-called “Norwegian Cost Factor.”⁵⁷ Nevertheless, we believe that some part of the cost and project management problems that occurred on Statoil's watch can legitimately be attributed to the company's prioritization of innovation over a more commercial approach to risk management. Characteristically, the company would favor novel solutions over established ones in these projects,⁵⁸ which was terrific for learning but also often the root cause of problems: for instance, the decision to do a major retrofit of a refinery acquired from BP in Mongstad instead of selecting cheaper, safer options in Germany or Sweden; or, in the case of Snøhvit, the use of a relatively untested LNG plant design instead of tried-and-true alternatives.⁵⁹ Not all of the fault lay with Statoil's risky choices; the Mongstad case was an example of how political complexities could be layered on top of Statoil's technical decisions. Both Statoil and Hydro were originally asked by the government to consider jointly implementing the Mongstad refinery upgrade,

⁵⁷ A present day example of how the NCS regulatory environment can push up costs is the “2 weeks on, 4 weeks off” work schedule for personnel on offshore platforms.

⁵⁸ One current Statoil manager said that the company propagates a guideline internally that a project is not to be considered a success unless there are at least five new things in it.

⁵⁹ Interestingly, a big part of the ostensible rationale for the new LNG plant design was potential cost savings. One could argue that incentives in the licensing process might implicitly encourage Statoil to make an overly aggressive estimation of costs to get an operator license, with the knowledge that it would be less likely than IOCs to suffer consequences if costs turned out to be higher, though he have no evidence that this actually occurred.

but it would have been more difficult for Statoil to pull out of the project and pursue foreign refining options as Hydro did.

Norsk Hydro saw the same NCS geology as Statoil but developed a different organizational culture in accordance with its different historical relationship to the state. Hydro was also considered to be innovative in petroleum—among its biggest successes was the development of the thin oil layer in the Troll gas field (PESD Interviews)—but in general it was viewed as less bold and also more attentive to managing project costs and execution than Statoil. Hydro’s perception of excessive risk was one commercial reason it pulled out of the Mongstad refinery upgrade. Hydro was minority state-owned until the early 1970s, and it had developed a strong industrial engineering orientation through its diverse manufacturing activities (PESD Interviews). Statoil, fully state-owned at birth, did not have the chance to develop an independent business-oriented culture at the outset. Hydro had a significant political base of support, particularly within the Conservative party though also through linkages of its unions to Labour, but it did not have the same entitled status as Statoil. The combination of its stronger business legacy and the perception that it was less politically protected probably contributed to Hydro’s greater prudence in its project management.

At the same time, it was precisely Statoil’s ability to pursue projects that non-state-backed players might have shied away from on their own that helped it play a key role (though far from the only one⁶⁰) in achieving the government’s goal of maximizing domestic benefits from development of a world-leading industry in petroleum, even at the cost of short-term rent collection.⁶¹ Statoil’s key role in developing Norwegian gas infrastructure illustrates this point. As Willy Olsen describes, Norway came face-to-face with the threat of limited gas sales options when the British government in 1985 indicated it would refuse gas from the Sleipner East field. Statoil served both to buffer the impact on the Norwegian petroleum industry with a replacement project (a third platform on Gullfaks) and

⁶⁰ Significant technology development in Norway was also spurred by measures not specific to Statoil. As Willy Olsen points out, the ministry required all companies to come up with technology transfer plans as part of the 1979 licensing round, and investment in R&D was made tax-deductible. Another government mechanism for increasing technological capability was the creation of NPD-led R&D initiatives involving broad-based cooperation between IOCs, Norwegian oil companies, and research institutions. Early R&D efforts that played an important role included the Chalk Research Programme (which drew upon and expanded early efforts by Phillips to understand the characteristics of Ekofisk) as well as an initiative aimed at developing improved oil recovery technologies. Current-day research priorities of the NPD include integrated operations (the use of information technology to connect onshore and offshore activities and make operations more efficient) and carbon capture and storage (CCS).

⁶¹ Any increased costs associated with using Statoil as a tool to achieve national hydrocarbon goals would decrease tax revenues and dividends.

ultimately to provide a dependable route to Norwegian landfall of natural gas through development of the Statpipe gas pipeline (on-time and on-budget) from Statfjord to Kårstø. IOCs, recounts Olsen, had been unwilling to take on the pipeline project in the face of the technical obstacles posed by crossing the Norwegian trench. Even Statoil's expansion of the Mongstad refinery, for all its problems in development, eventually became a significant asset for Norway.

In the way that it served as a driver of the development of a petroleum industry, Statoil is remarkably similar to Brazil's Petrobras, another leader in subsea technologies, which similarly benefited from both challenging geology at home and ample government support. Statoil officials themselves cite Petrobras as the company most similar to Statoil in corporate culture. (Probably not coincidentally, in addition to their similar histories as innovators, neither company has traditionally been known for a particularly efficient organizational structure.) Both Statoil and Petrobras created strategic R&D operations to a greater degree than IOCs, which almost always subordinated their R&D efforts within commercially-oriented project teams (PESD Interviews). Such long-term R&D was expensive but led to numerous technological breakthroughs as previously described.

Some observers worry that Statoil may be slowly losing its longer-term perspective on technology development as market pressures since partial privatization encourage it to emulate its private competitors in prioritizing R&D more closely in accordance with near-term commercial benefit (PESD Interviews). Such concerns have grown more acute since the merger between Statoil and Norsk Hydro, as technology competition between the former rivals used to play an important role in advancing the state of the art on the NCS. These trends could negatively impact the Norwegian supply industry, which developed its worldwide competitive advantages in part on the back of long-range technology investments by Statoil, aided by a competitive dynamic in which both Statoil and Hydro would partner with distinct suppliers. The supply industry also benefited significantly from explicit local content preferences in early licensing,⁶² which according to Storting Report No. 53 increased the Norwegian share of delivered services to petroleum operations from 28% in 1975 to 62% in 1978 (Al-Kasim 2006). Such high levels of local content persist to this day.

⁶² Article 54 of the Royal Decree of 8 December 1972 specified that: "Licensees shall use Norwegian goods and services in petroleum operations to the extent that these are competitive in terms of quality, service, delivery time and price."

6. The Path Forward

Statoil and the Norwegian state both face significant challenges moving forward. For Statoil, the key question is how rapidly the company can evolve into a truly global player while continuing to keep domestic production high for as long as possible. This means growing reserves through improved domestic exploration results (ideally helped along by government willingness to open more areas) as well as through both strategic M&A and organic exploration efforts abroad. And of course Statoil must procure financial terms for international operations that allow it to turn production into profits. Statoil's innovative character is one of its great strengths in confronting these challenges but by itself will not be enough to assure the company's global competitiveness. Like its competitors, the company will have to continually find the right ways to meld technological leadership with hard-headed strategic decisionmaking and efficient execution.

The degree to which Statoil's NOC heritage will prove a significant competitive advantage in international operations is still very much an open question. Tellingly, perhaps, much of Statoil's international expansion in recent years has been through strategic M&A activity that does not depend on any privileged position in closed markets, most notably its acquisitions in the deepwater US Gulf of Mexico, oil sands in Canada, and shale gas in the US (Wood Mackenzie 2010a). While Statoil has many interactions with other NOCs, especially through cooperative technology agreements (most significantly with Petrobras), there are few cases thus far in which Statoil's privileged relations with other NOCs have proved obviously decisive in enabling it to clinch access to resources. One example where being an NOC might have put Statoil on a privileged track was in Algeria. BP was looking for a joint venture partner, and some interviewees felt that BP chose Statoil without considering other candidates because Statoil's good relations with Sonatrach would make the Algerian NOC's approval of the deal straightforward. On the other hand, one interviewee suggested that Statoil might have overpaid for the deal, and that the relations between Statoil's head of international E&P at the time, an ex-BP employee, and his former company might have been at least as important as the links between Statoil and Sonatrach (PESD Interviews). Other examples are equally ambiguous. Being an NOC could have given Statoil some edge in being elected a partner with Total and Gazprom in the Shtokman project. Statoil may also have benefited from efforts by the respective governments of arctic neighbors Norway and Russia to build relations. (Of course, large oil companies can benefit from their countries' diplomatic efforts whether or not they are NOCs.) At the same time, Statoil's experience with natural

gas in harsh, deepwater environments made it a logical choice anyway. As in the Algeria case, some argued that the contract terms were not so desirable, although IOC Total proved willing to accept them as well (PESD Interviews).

For Norway, whose petroleum resources are still far from dead, the challenge going forward is fundamentally the same as it has always been: how to maintain control over petroleum resource development and best use the resulting revenues for the benefit of Norwegian society. Norway has demonstrated impressive prudence in managing its petroleum riches so far, but political pressures to do otherwise are perhaps growing and are unlikely to disappear. As for control of the NCS resource itself, the disappearance of Norsk Hydro's presence in petroleum certainly complicates the job of the civil servants who have helped keep Norway's oil administration on an even keel so far. Synergies on the NCS were one valid justification for the merger, but the converse of this potential benefit was the creation of a dominant player that operated around 80% of the oil and natural gas production on the NCS. The three principal Norwegian oil companies of the 1970s, already winnowed to two with the takeover of Saga Petroleum by Hydro in 1999 (Nore 2003; Ramm 2009), were reduced by the merger to only one. Competition between Statoil and Hydro on the NCS, and the accompanying ability of state authorities to compare two distinct Norwegian points of view on oil and gas development solutions, was always the most effective check on the domestic performance of Statoil. IOC licensees could in theory have played a similar role but in practice often held back as foreign players for fear of irritating politically-powerful Statoil; Hydro, with its own domestic political base, did not have this concern. Now this critical balance has been removed, which will truly test the ability of Petoro, the NPD, and the Ministry of Petroleum and Energy to maintain leverage over the sector.⁶³ Specific concerns include the impact of decreased competition on the efficiency of Statoil's NCS operations and pace of projects as well as the effect of Statoil's near-monopsony buyer position on the vibrancy of the Norwegian supply industry. Possible policy responses could include efforts to increase the role of IOCs on the NCS to the extent politically feasible and to further incentivize small companies to expand their contribution. Norway has responded creatively to imbalances on the oil patch before; time will

⁶³ The NPD has been allocated more resources by the Ministry to hire staff in order to enhance its ability to keep tabs on Statoil (PESD Interviews). Petoro's counterbalancing role may become more important as well, but mere exhortations from this watchdog company have less bite than direct competition from Norsk Hydro, and the government has made it clear that it does not intend to let Petoro grow into an operating company that would compete toe-to-toe with Statoil. Both Petoro and suppliers have expressed concerns since the merger that some projects are proceeding more slowly than promised. Statoil has explained delays as representing natural post-merger growing pains (PESD Interviews); more recently, the global economic crisis could be having some effect as well.

tell how it adapts to this one.

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Appendix 1 “10 Commandments” for Norwegian oil sector, our translation (Source: Parliamentary Report, June 14, 1971)

In accordance with the government’s view that an oil policy should be developed with the aim of ensuring that the natural resources on the Norwegian Continental Shelf are exploited for the benefit of the whole society, the committee prescribes:

1. *That* national management and control of all operations on the Norwegian Continental Shelf be ensured
2. *That* petroleum discoveries on the NCS be exploited so as to make Norway as independent as possible with regards to supply of crude oil
3. *That* a new industry based on petroleum be developed
4. *That* the development of a petroleum industry occur with due consideration for existing industry and the natural environment
5. *That* the flaring of gas not be allowed except for short testing periods
6. *That* petroleum from the NCS should as a general rule be landed in Norway except in cases where socio-political considerations dictate another solution
7. *That* the state involve itself at all appropriate levels to coordinate Norwegian interests within the Norwegian petroleum industry and to create an integrated Norwegian oil community
8. *That* a national oil company be established to attend to the government’s commercial interests and to facilitate cooperation with domestic and foreign oil interests
9. *That* activities north of the 62nd parallel be compatible with the distinct socio-political conditions in that region of the country
10. *That* it be understood that Norwegian petroleum discoveries will present new tasks for Norwegian foreign policy