Landlord and Entrepreneur: The Shifting Roles of the State in Norwegian Oil and Gas Policy

OLE GUNNAR AUSTVIK*

This article discusses the shifting roles of the Norwegian state as landlord and entrepreneur in developing and maintaining its national oil and gas industry. Drawing from endogenous-growth and small-state theories, the article discusses the roles of the Norwegian state as infant industry developer, mature industry controller, and national company owner. The Norwegian petroleum experience shows how a nation-state expressed clear visions and goals for an industrial sector, and took the role as leader of industrial and economic developments itself. The case argues that for a strategic national industry to be competitively developed and retained and social goals reached, a strong, comprehensive, and dynamic interaction between the state and industry, led by the state, may be necessary.

Introduction

Being involved as both landlord and entrepreneur, the Norwegian state became an innovator and leader of its oil and gas activities from the 1970s. Through several discrete and incremental innovative changes, the state managed to create a competitive national petroleum industry from nothing, in only a couple of decades. It also managed to take most of the profits from the activities itself. The state used not only regulative, legal, and political measures to achieve its industrial and socioeconomic goals, but also started to act as an industrial entrepreneur itself. In its first decades, the control mechanisms became so strong that Johan P. Olsen (1989, 104) considered it to approach "the limits for what a capitalist state can do if it wants to remain capitalistic."

The article is structured as follows. First, a discussion of the shifting roles of a state as landlord and entrepreneur in developing and maintaining a national industry in a liberal international economy is provided. Second, an attempt is made to position the approach within the varieties of capitalism literature. Third, the roles of the Norwegian state as infant industry developer, mature industry controller, and national company owner are analyzed. Fourth, the dynamism of the Norwegian landlord-entrepreneur mixture with respect to changes in industrial and market

*Lillehammer University College

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maturation and exogenous change is analyzed. Fifth, the impact of state fragmentation on policy strength is discussed. Sixth and finally, remarks are made regarding the extent to which the case can be used as a means of gaining insight into the scope and scale of the political maneuvering room for a state in a liberal international economic regime.

The State as Landlord and Entrepreneur

In a liberal international economic regime, the state is mostly considered to be regulator and coordinator of economic activities (Hall and Soskice 2001; Porter 1990; Strange 1988). The possibility of a stronger role for the state with respect to industrial leadership and direct involvement is often considered contrary to the prevailing neoclassical economic school. However, in the petroleum sector, the Geneva Convention of 1958 assigns an active role to the state from the outset by dictating that national governments have the exclusive rights to exploit resources found on their respective countries' onshore and offshore territories.

As exclusive resource owner, the state can rent or lease the rights to explore and extract the resources to a private company as a landlord, or it can become an industrial entrepreneur itself (Klapp 1982, 1987). When acting regulatively as landlord, the state makes contracts with the companies whereby the state grants to the (private) companies as tenants the possession and use of the resources for a period and under certain conditions, regulations, and prices. The scale and scope content of such contracts may vary considerably. It is the combination of the various ordinances that make up the total relationship between them. Ronald P. Dore (1959, 352) quoted this definition from Toshio Furushima's studies of the Meiji landlord system in Japan in the late nineteenth century:

> The landlord system . . . does not mean simply landlord-tenant relations but . . . the structural totality of land-ownership which forms a special characteristic of the fundamental base of totality of social relations.

When acting as political entrepreneur, the state takes the political helm for the development of the industry and may become directly involved in the activities (Austvik 2007). The role of the state may, in this context, resemble Joseph Schumpeter's (1942) conception of a private entrepreneur, as found in the endogenous-growth theory. When combining the roles as landlord and industrial entrepreneur, the state can engage in the business in a manner similar to a private entrepreneur or a company, but the state can also use political and legal interventions and regulative measures to reach its goals (Austvik 2010, 106–109; Eisinger 1988). As a political entrepreneur, the state can define social (as opposed to private) goals for economic activities and use measures to reach those goals that private entrepreneurs do not have at their disposal. Social goals should include more long-term concerns and comprehensive views on economic activity than private businesses have. The goals for society may converge with the goals of private profit-maximizing firms, but in many aspects social goals also conflict with private ones.

However, when an industry is in its infancy, the state's role as an entrepreneur in creating something new involves more risk taking than the role of a landlord demands. These include financial risks as well as the general political risk of not succeeding in developing new and successful technologies, markets, and organizational and political solutions. As for private entrepreneurs that do not achieve ex post success, the project is a failure, and often not considered an enterprise at all, along with the accompanying economic and political costs to the state and individuals involved. However, when a state takes on more risk, the potential benefits should also be larger than when a project is less risky. It is because states have considered the potential rewards (with respect to profits, industrial developments, and political control) to be so much greater than the risks, that they in many countries have actively intervened in their petroleum industries as entrepreneurs themselves. The uneven balance in favor of rewards versus risks was, for example, an important backdrop for the "revolution" of the Organization of Petroleum Exporting Countries (OPEC) in the 1970s. The nationalization of the oil industry in these countries contributed to move both OPEC and non-OPEC states from being principally regulators and taxmen in relation to companies to being directly involved in the operation of the industry itself (Mommer 2002).

> The state is switching from a landlord to an entrepreneur. No longer is the industry just a matter of oil companies making profits and governments collecting taxes . . . [but they] . . . produce a predictable pattern of corporate structure for state enterprise. In developed countries, pluralistic national industry structures that coordinate domestic and international groups through redistributed taxes and state oil company subcontracts are developed. (Klapp 1982, 575–576)

The balance of risk and reward shifts, however, when the underlying conditions change. First, the higher the product's price is compared to costs (the profit), the more attractive it is for the state to get involved in the industry, both from its own interests and from social concerns. Second, when an industry or market, or both, matures, the risks of getting involved become smaller but so do the rewards in most industries. The entrepreneurial state gains most often when innovative solutions must be found to create new, sustainable, and desired solutions for the industry, the market and society, and when the state can perform better by itself instead of relinquishing the activities to a regulated private sector. Nevertheless, the question for the state as for a private entrepreneur is still whether it can afford to take on the risk associated with the project. This issue parallels the distinction between entrepreneurship and management in private business. On the one hand, an entrepreneur develops and organizes new activity, an undertaking that is different from that of leading an existing and established enterprise, and takes on the risk, hoping for substantial profits or other benefits; on the other hand, a manager is employed to run the enterprise that has already been successfully established, along with the lower risks and profits for herself.

After a build-up period and demonstrated success, the state no longer has the same entrepreneurial reason to control companies directly. However, other strategic reasons to own and control them can be important in "late" industrial phases. These motives can include the desires to control the industry politically, to secure that long-term interests are ensured against the short-term perspectives of commercial businesses, to internalize positive and negative externalities in company decisions, and to perform optimal resource management when such concerns are not easily regulated. The state can also retain active and specially designed policies toward a mature industry in order to collect more economic rent (supernormal profit) than what would result from the corporate tax system if such rent exists in a mature phase (such as in the petroleum sector). Obviously, the more important a sector is for the economy, the more reasons there are for the state to have a strong hand on its development or maintenance, or both.

Whether a government should create its own company or use regulations to achieve goals depends on the situation. A state-owned company undertakes commercial activities on behalf of an owner government. Its legal status can be as a direct part of government or as a stock company with the state as the majority shareholder. With the former (in the oil industry as a national oil company [NOC]), the influence over the company can be made directly through the management, with the latter (in the oil industry as a stock-registered NOC [SNOC]), influence must be exercised through shareholders' rights. In the long run, the state may have a decisive say in both, but as a NOC it has a stronger say on a more detailed level and on a day-to-day basis than it would have as a SNOC. The two forms of state companies differ from other forms of governmental agencies or state entities established to pursue nonfinancial objectives in that they establish, for instance, landlordly institutions set up to regulate the economic activities performed by others. Such regulatory agencies define the rules of daily conduct for the SNOC as they do with private actors, but this role is diminished with regard to the behavior of a NOC. The use of a SNOC, and even more the use of a NOC, expands the political maneuvering room of the state compared with what is envisioned in the neoclassical economic school of thought.

What can the state achieve through the establishment of a state-owned oil company in contrast to the sole reliance on regulatory measures? A NOC may resemble a nonprofit corporation because it has its goals defined by the government and not by shareholders. Profit is part of the company's goals but not necessarily the only goal. A NOC is useful when it is necessary for the state to secure actions at a detailed level, especially during an immature phase of its development or when the company is dealing with issues of national strategic importance. A SNOC is useful when such matters can be better treated as commercial affairs by the company. A

SNOC defines its goal as the maximization of its return on investment. In order for the government to achieve its social goals when the NOC becomes a SNOC, it must employ regulatory measures instead of directing the management. The government has, however, a direct hand as majority shareholder and can thus replace the board (and therewith the management), which means that it retains power over long-term strategic questions. If it is not necessary to implement strategic issues through the company, then the government can limit itself to using regulative measures to influence its overall behavior.

Furthermore, to generate a strong national industrial policy and, hence to be able to act as political entrepreneur, the general statist perspective usually argues that the government must be able to separate its own interests from the interests of others: "the state must be treated as an unproblematic unity" (Ashley 1984, 238).

Small states are especially affected by developments determined beyond their borders. The ability of small states to reach their goals, despite the loss of sovereignty that the process of economic integration entails, is important for the balance of dependency on larger states (Cooper 1968; Elman 1995). In spite of their size, small states can achieve their objectives because they often benefit from a "complex interdependence," whereby societies are connected in multiple ways and the hierarchy of issues is absent or weak (Keohane and Nye 1977, 24–29). Peter Katzenstein's (1985) argument that small countries more easily adjust to changes because it is easier for them to reach consensus-oriented decisions in corporate domestic structures suggests that a small country could potentially be more dynamic than a bigger one in decision making, and that policy outcomes in bi- and multilateral relations as a consequence depend on more than just sheer formal, economic, and political preponderance. Instead, what is important for a country seeking to remain competitive, or in more general terms, to reach the goals it sets up is the relative ability to develop policy. Merrie Gilbert Klapp (1987, 38–65) argues that states could not have created their public enterprises in general and NOCs in particular in the face of major opposition from society.

Political Entrepreneurship and the Varieties of Capitalism

Susan Strange (1988) suggests that a narrowing of the range of capabilities of states as sovereign actors occurs in a liberal international economy. She argues that weak or partial arrangements of intergovernmental cooperation in which markets have a freer hand have gained significant power relative to that of territorially bound nation-states since the 1970s. The later literature on the varieties of capitalism (VoC) largely discusses variations in policymaking under this assumption. It brings the firm and its role in relation to the sustainability of national comparative advantage into the center of international political economy. It focuses on regulatory regimes and strategies of coordination between firms, thus giving rise to the concept of comparative institutional advantage (Hall and Soskice 2001).

In both the liberal and coordinated market economies (LME and CME, respectively), according to the VoC literature, the role of the state is compatible with mainstream neoclassical economic theory. The LME approach focuses on how market mechanisms lead to solutions for the coordination between firms, their financiers, employees, suppliers, and customers. Industrial relations and collective bargaining takes place at the enterprise or workplace level. Because of the dominance of the market, LMEs typically exhibit relatively short-term and adversarial relations between economic actors. In the CME approach, the literature focuses on formal institutions as playing an important role for the regulation and coordination of interactions between firms and others. CMEs tend to be characterized by long-term relations between economic actors, which are also relatively cooperative, as a source of comparative (or more correct, competitive) advantage.

The VoC literature "predicts that socioeconomic performance is better in countries that best fit one or the other of these two types" than would be the case with a hybrid (Campbell and Pedersen 2007, 308). Nevertheless, when the state enters the role of a political entrepreneur, it defines the visions and goals for activities and combines dynamically, in a realist and interventionist way, hybrid political and regulative instruments. It further expands measures to realize the possibility of the state being an industrial actor itself in infant industry developments and in sectors of strategic national importance,[1] in distinction to those sectors with only commercial significance. Hence, a sector's comparative advantage also relies on comparative advantages and strengths in policymaking. Michael Porter (1990, 617–682) outlines the importance of a relevant and active state in his discussion of the role of governmental policy for sustained competitive advantage. Yet, when the state itself becomes directly involved in economic activities as an industrial entrepreneur, the measures to reach goals may go beyond what Porter suggests is proper for the state in a liberal economy. Different national economic models are, moreover, shaped not only by autonomous market forces and coordination but also by the nature of states and state differences (Esping-Andersen 1990). History is often path dependent, and it may prove difficult to change (and even to want to change) policy when current situations transform (Veggeland 2007).

However, owing to the nondiscriminatory requirements in international integration arrangements, national goals can no longer be reached by normative political means alone. These efforts must be complemented by the state either as actor or as regulator according to the situation. Hence, paradoxically, the prohibition of discriminatory actions between companies in a liberal regime can, when national interests need to be defended, lead to more direct state involvement (Arnesen 1995, 539). State and state-influenced organizations and companies can make investment decisions and actions that have positive social effects, which may be different from the effects resulting from the decisions of a private company. According to Strange's (1988) argument, the maneuvering room for state policy has become narrower, but if the state itself is willing to become directly involved, it can be expanded. The processes of international integration can then be considered de facto intergovernmental, even if it is de jure neofunctional. The application of the endogenous growth theory for understanding the behavior of the modern capitalist state as political entrepreneur in strategic sectors makes it possible for one to regard the state as being innovative and dynamic rather than as statically adhering to one or the other economic type, model, or tradition in the VoC literature. In this perspective, the Norwegian petroleum model can be considered an expanded forerunner of the hybrid from the very start.

The Norwegian State as Petroleum Entrepreneur

The State as Infant Industry Developer

The energy industry and markets focused on in this article are special compared to most other industries and markets. In addition to the state's exclusive legal ownership to the resources, the sector is special in relation to the persistency of an economic rent and the strategic importance of the commodities in both producing and consuming nations' economies. These factors have long made them highly politicized (Noreng 1999; Rees and Odell 1987, 190). Many producing countries have also been victims of the resource curse paradox.[2] States in both producing and consuming countries have intervened strongly and persistently in energy industrial and market behavior throughout the twentieth century, with and without success (Baker Institute Energy Forum 2007).

The Norwegian state was one of those states outside of OPEC that wanted to control revenue, production, and management of what in the early 1970s was a new and potentially economically and politically dominant industry for the country. Long social-democratic traditions, which were shared across party lines, of strong state participation in many economic activities made it possible to formulate consensus-oriented visions and policy goals for an independent Norwegian petroleum administration and industry in the early 1970s.

The Storting (the Parliament) expressed the vision and goals in 1972, which later became known as the "Ten Oil Commandments" (Stortingsmelding 1970–1971). With this background, the state's own oil company, Statoil, was established by a unanimous Parliament decision. The company was to be an important actor in developing a national petro-industrial system. The Norwegian Petroleum Directorate was established as a regulatory body under the Ministry of Industry. Together with the development of international law of the seas since the 1960s, this vision has put

Norwegian sovereignty in the main seat (Hanisch and Nerheim 1992). The slogan was that oil and gas activities should "benefit the whole nation."

The leading idea was that the state, through the later Ministry of Petroleum and Energy (MPE), should approve all steps and at all levels in the sector in order to promote both competition and cooperation so that the value of each license would be maximized (MPE annual). The state, through the Ministry of Finance, took all taxes (except for local property taxes), including a special tax on petroleum activities to capture most of the economic rent. The clipping of Statoil's wings in 1984 and the arrangements with the State's Direct Financial Interests (SDFI) ensured that the entire rent from these shares went to the state. The creation of the Gas Negotiating Committee (Gassforhandlingsutvalget, GFU) in 1986 was another step to control activities. In addition, the Supply Committee (Forsyningsutvalget, FU) was established in 1993 as a counseling body for the MPE to evaluate which fields should supply each contract.

The GFU/FU system, SDFI ownership and Statoil represented a strong policy package that, by coupling with the international oil companies (IOCs), made it possible to build and sustain in a relatively short time a new, internationally competitive Norwegian industry cluster largely under the control and direction of the state. The state was relatively united and able to define its strong visions for the nation's and own development, and willing to use all available tools in a realist policy approach to reach its goals. The maneuvering room for policy that allowed for a strong and discriminatory state policy during the period was defined in part by a beneficial domestic situation, in part by the general international situation, and in part by the petroleum sector in particular.

The State as Mature Industry Controller

The more liberal international and domestic regimes since the 1990s, lower prices and industrial and market maturity influenced and contributed to the change in the Norwegian model into a new and modified landlord–entrepreneur mixture, which occurred as recently as the early 2000s. Technological developments and the need for lowering costs renewed the interest in more cooperation with the IOCs in the 1990s after the period of strong nationalization. Lower profit margins made companies stronger in relation to the state, but the situation also showed more clearly than before that the state and the companies had many interests in common. The petroleum sector now looked more like other industries. A general understanding of the need for more foreign technological competence evolved (Ryggvik 1997, 61–62). The Norwegianization policy in the 1970s and 1980s led to employment, growth, and competence in Norwegian companies (Olsen and Reiersen 1991, 929). However, the lower profit margins after 1985 weakened the state's power to require that the companies must also satisfy national (industrial policy) goals (Nerheim 1996).

The new situation changed the state's political entrepreneurship to one that was more regulatory. The content of the entrepreneurial role this time was to release and accommodate industrial solutions in accordance with the interests of the state, oil and gas companies, the supply industry, and the trade unions through coordinated actions (the NORSOK cooperation). The relations between the supply industry and the oil companies changed as the supply industry increasingly took on subenterprises in projects, in contrast to the early phase when the oil companies controlled most of the details.

Politically, the agreement about the European Economic Area between the European Free Trade Association and the European Union (EU) challenged established the preferential arrangements for Norwegian industry (Stern 1998). In addition, Statoil's self-initiated process of privatization (to change from a NOC to a SNOC) of the late 1990s eventually resulted in a transformation of decisions regarding how the state should take care of its interests—these became pronouncements that were defined and made explicit, whereas before they had formally been internalized in the company's decision-making process. These processes encouraged the scaling down of the state into a mere regulator of petroleum activities, an actor that was no longer a strong industrial participant as before.

The ensuing economic liberalization, market reforms, and reorganizations according to the principles of New Public Management (NPM) in the 1990s largely defined the ideal role of the state as a regulator of economic activity in most countries. For example, after a strong period of nationalization in the 1970s, Canada and the United Kingdom completely privatized their petroleum industries. Market reforms also took place in countries like Russia and Malaysia. The remaining fully or partly state-owned NOCs reevaluated their strategies so that costs, effectiveness, and technological innovation became relatively more important than national political control. On the demand side, countries such as the United States and those in the EU in the developed world and China, Brazil, and India in the developing world similarly oriented their energy policies toward liberalization and NPM solutions.

However, in contrast to countries like the United Kingdom and Canada, the Norwegian state remained at the helm and continued to reap most of the profits from the activities, with little political opposition from within the country. Two new fully owned state agencies were created as result of Statoil's privatization and EU regulations: *Petoro*, which was to take over the SDFI, and *Gassco*, which was to secure the open access for the transportation of gas. The new *Gassled* tariff system was introduced and offered equal tariffs for everyone using the Gassco system (MPE 2002). Earlier, Statoil handled both the SDFIs and most of the transportation system. A new wing clipping of the company took place.

Demands by the EU and Statoil's privatization, together with technological changes and industrial maturity, made it necessary and sensible to rearrange the industry according to new realities (Claes 2002). The

Norwegian government managed, however, to give the new structure a form that enabled the state to maintain control. As the state remained a 100% owner of the SDFI and main shareholder in Statoil (with some 67% of the shares), it could still have a strong de facto direct say in the decision making. The structure of concentrated ownership of reserves and production implied that the state remained the dominant seller of Norwegian gas, even though the GFU construction was abolished. If it had not been abolished, the arrangement would have needed modifications in order to create a more dynamic structure that would be able to sell in a more mature European market. As with the clipping of Statoil's wings in 1984, the result of the rearrangements was not reduced, but changed and partly augmented state participation. Two new governmental agencies were created, and the MPE was now to regulate directly activities that formerly were handled by Statoil.

Thus, when the industry and markets matured and the international regime became more liberal, the visions and goals from the Ten Oil Commandments were largely maintained and adjusted to sectorial specifics as they evolved. Direct influence over Statoil was to be formally exercised through shareholders' rights. Keynesian and industrial interventionist principles from the infant stages were gradually replaced with more liberal ideologies, where an active state running industrial activities became less acceptable. At the same time, an entrepreneurial state was less needed. The maturity of the industry contributed to a principal logic based upon less direct interventions in commercial decisions, as seen from the state's point of view. In this way, the state continued to control what it considered necessary to control, left the commercial decisions largely to the company, and remained the largest capitalist in the sector.

A State Company as Political Instrument

In Norway, the Ten Oil Commandments of 1972 had proclaimed from the start the goal of establishing a state-owned oil company. The commandments were concerned with national control of the petroleum sector and the building of a national oil industry. The most specific commandment related to Statoil was Commandment 8:

> That a state oil company be established to take care of the state's commercial interests and to maintain suitable collaboration with domestic and international petroleum interests.

The company was to support the state in the realization of the other nine commandments. The establishment of Statoil was the most important single instrument used by the state to ensure that oil activities would "benefit the whole nation." With the establishment and development of Statoil, many basic competitive principles were set aside. Already in 1972, without any knowledge of the industry at all, Statoil was awarded a 50% partnership in the transmission company, Norpipe, which was established to transport oil from Ekofisk to Teesside in the United Kingdom and gas from Ekofisk to Emden in Germany. Statoil was also given huge shares of the most attractive fields, for example, 50% of the Statfjord field in 1973. The company received preferential treatment in several ways. The principle of "carried interest" implied that Statoil did not pay the expenses accumulated in the exploratory phase; these costs were covered by the other licensees. The principle of the "gliding scale" of 1974 implied that Statoil could increase its share of a license to as much as 60–80% when production came on stream.

Statoil's privatization took place at the same time as the EU was making demands for restructuring the sector, and this process was adjusted according to these new pressures (Austvik 2010, 118–124). The company wanted both to be freer in its decision making and to expand abroad. Europeanization and globalization of the international economy, liberal economic trends, and pressure from the EU were other important factors. Being privatized, the company could no longer take care of the same functions for the government as it did before. Privatization required a clearer definition of the role of the state and its interests, new ways of promoting efficiency and distribution, and a rearrangement of the political and social aspects of petroleum activities so that they would be in line with EU rules and practices. The change from a NOC to a SNOC meant a weaker hand by the state on commercial decisions, but the state still retained the possibility of a final say in strategic questions.

Concerning national control (Oil Commandment 1), there was for a long time a fear that Statoil would gain too much power within the industry, as well as in the country. Steward Wood (2001), in his comparison of public policy and industry in the United Kingdom and Germany, considered whether or not "business" in a country is "junior partner to government" or the other way around. In the establishment phase of the Norwegian petroleum industry, it was clear that business was a "junior partner to government." As the role of Statoil as an instrument of the state diminished in 1984, down to the point of privatization in 2001, it became a Norwegian multinational oil company with engagements in many countries. Now, the Norwegian state supports Statoil's international engagements in countries such as Azerbaijan, Angola, Algeria, Libya, Russia, and Venezuela. Moreover, Statoil is more freely promoting its interests at home.

As Statoil has become "only commercial," questions have been asked about whether the government has become a "junior partner to business" (a principal–agent problem), just as the fear expressed in the 1980s when the company's wings were clipped. International ideological change together with high oil and gas prices over the last decade and the maturity of the industry have transferred some power in determining national petroleum policy in the direction of the industry itself—and Statoil to act as a grown cuckoo in the Norwegian political nest. If the government does not make use of its majority stake in the company in order to make decisions when private and social interests conflict, there is a risk that the company will lead the government in the formulation of petroleum policy. The entrepreneurial role of the state in relation to the company has, in such a situation, thus ended, and the tenant is to some extent taking care of the landlord. However, the change from being a NOC in the infant phase to a SNOC in the mature phase appears logical in Statoil's case. That the state has remained as majority shareholder also makes sense because of strategic role the petroleum sector for the country, with Statoil remaining as the dominant actor.

The Dynamism of the Norwegian Landlord–Entrepreneur Mixture

The Norwegian petroleum experience indicates that the state has a major role to play in infant industry developments and in sectors of strategic national importance. Strong state measures were clearly more needed in the build-up phase than after maturation (infant industry protection). The size of the petroleum industry was, however, so large and in more ways influential such that an active state was persistently needed to control the industry politically.

As political entrepreneur, the Norwegian state combined several types of instruments and roles during the creation and development of its petroleum industry. With relatively high industrial and political competence in the state apparatus and among politicians, the state changed policies and developed them over time in order to adjust to new industrial and market realities and new domestic and international political situations, for the intended benefit of industry and the state itself. The Norwegian state resisted the international trend of decreasing and increasing state participation according to changes in the profitability of the industry and political trends (as in many other countries), but instead liberalized subelements when it deemed that such a change was timely. The state also increased its direct control of and engagement with the industry on several occasions. The main policy elements were:

1. Providing a national ideological and visionary platform for the industrial and social goals of petroleum activities (the Ten Oil Commandments);
2. Regulating and protecting the functioning of and framework for the domestic markets to support the Norwegian supply industry and oil companies in the build-up phase;
3. Providing a strong state-controlled industrial and resource-management system, including the MPE and the Petroleum Directorate, as well as instruments like the FU;
4. Establishing its own oil company, Statoil, with substantial preferential treatment and governmental control;

5. Engaging IOCs at an arm's length distance to acquire capital and competence;
6. Being engaged directly downstream in the sales of natural gas through Statoil and the GFU, and in the relations to purchasing countries and companies up to the 2000s;
7. Developing a foreign policy that attempted to strike a balance between major international political powers, as represented by political allies in the International Energy Agency and economic interests in OPEC, and later with Russia;
8. Introducing a heavy system of taxation (78% of net profits), and the arrangement with the SDFI to ensure that the major share of the economic rent goes to the state;
9. Establishing the Petroleum Fund to decouple expenditures from earnings of state oil and gas revenues and to protect the country against Dutch disease;
10. Increasing state participation, when clipping Statoil's wings in 1984, establishing the GFU/FU system, by establishing Petoro and Gassco and the new tariff system Gassled in 2001.

As an entrepreneurial *risk taker*, the Norwegian state took on the economic and political costs to make an ex ante nonexistent Norwegian petroleum cluster competitive. In certain periods this required substantial direct financial contributions (the SDFI). The policy was ex post largely successful—this is what in Schumpeter's terms could be called a process of radical innovation. In a relatively short time, it led to the emergence of a competitive Norwegian petroleum cluster, and gradually to enormous profits for the Norwegian state, which can now be seen in the growth of its Petroleum Fund (now called the "Government Pension Fund Global"), and yet, if following an overall LME/CME approach as discussed in the VoC literature, a competitive Norwegian petroleum industry should not have been developed. Ideologically, the state operated with a realist approach as both interventionist landlord and industrial entrepreneur.

After the successful build-up of the petroleum sector, the Norwegian state became increasingly concerned with the macroeconomic and social long-term aspects for the country and with dealing with the huge sums accumulating in its Petroleum Fund, established in 1991. The idea of establishing the Fund was to transfer resources from the bottom of the sea to international financial markets, which would produce a higher and more stable yield over time. This strategy was in line with the "Hotelling rule" (Hotelling 1931); that is to say, it sought to protect the economy from boom-and-bust cycles and to make use of the income in a smoother and long-term (over generations) manner. As a result, Norway has done quite well in protecting its economy from the problems of Dutch disease and the oil curse. The Fund is considered as a Sovereign Wealth Fund

(SWF) that invests its financial assets in international stocks, bonds, and property. As an SWF owner, the Norwegian petro-state has entered the international financial world as one out of few international state capitalists and creditors.

The role of the Norwegian state over time has been rather stable with respect to its visions and preferences for its petroleum sector. The state has retained a strong interventionist policy, control, and supervision. Most (albeit not all) of the state's political control and revenue-generating mechanisms have been maintained. Some segments of policy have been changed in direction of privatization and liberalization, while in other segments, the state has taken on a stronger and more direct hand. The Norwegian state's petroleum enterprise has so far reached many of the goals set up in its Ten Oil Commandments. In sharp contrast to a business-as-usual situation, the significant exogenous shock experienced by the Norwegian state when petroleum resources were found spurred it to act vigorously and discretely. In the face of the petroleum discoveries, responsible policy was at the time thought to require dramatic (i.e., discrete) decisions.

Facing the dramatic growth in the Petroleum Fund that has resulted from the petroleum enterprise, for which Norway has not invested much labor or capital (because it is the accumulation of economic rent from oil and gas production and returns on international financial investments), the Norwegian state might consider elements of discrete entrepreneurial actions again. However, Norwegian macroeconomic policy appears to be in the situation of the LME type, where the situation may require discrete steps as the responsible response to a new unique situation (such as much more strongly building domestic infrastructure). The maturation of the industry, political fragmentation, and economic well-being of the country signal, however, that the strong role of the state may have been weakened. The profits in the petroleum sector, both for private and state actors, and political fragmentation have diverted attention away from apparently less profitable economic activities and regions without petroleum resources. The influence of the industry itself (with its shorter term profit horizons) and the use of the Petroleum Fund are issues that will challenge the social visions from the Oil Commandments in the years ahead.

State Fragmentation and Policy Strength

The domestic acceptance of the creation of a strong NOC and policy from nothing was crucial to the success of a powerful political petroleum entrepreneurship by the Norwegian state in the 1970s. The Norwegian petroleum experience, including the adjustments toward a more liberal model in the early 2000s, shows that it is possible to retain important political goals both in liberal and in less liberal international conditions if domestic visions, goals, and unity are largely retained. However, as in many other countries, the domestic Norwegian political picture has become more diverse in the 2000s than it was in the 1970s and 1980s.

> The Norwegian state is fragmented compared with an ideal picture of democratic governance through representative and executive organs. It is also more fragmented than the systems for governance that might be the case in other countries. (Tranøy and Østerud 2001, 7, author's translation)

Ideological effects, the regrouping of domestic actors, and political fragmentation indicate that the Norwegian petro-political consensus over the role of a strong state is about to be weakened. The tradition for policy formation was to look for broad compromises across institutions, political parties, and the bureaucracy (MPE) in the petroleum sector; only in the areas of foreign and security policy were consensus-based procedures explicitly sought. Often political and commercial spheres were coupled (Barth 1962). Discussions within the country were not concerned with whether or not the state should be involved in the industry, but rather how. The initiatives for changes in the 2000s were, however, taken by company interests (Statoil) and the EU, in what was a radically changed liberal international ideological environment. While the state acted proactively to the issue of privatization and the implementation of EU competition law and directives in 2001–2002, it did not, however, offer many arguments of its own when Statoil and Hydro agreed to merge their oil and gas activities in 2007, in spite of criticism that this merger drew.

Compared to the start-up phase, the domestic political fragmentation has contributed to a weakening of the realist or economic nationalist view of how Norwegian petroleum interests ought to be defined. In general, Norwegian petroleum interests are rightfully shared by all political parties as long as they do not induce intra-Norwegian conflicts of interest. However, the objectives for petroleum activities and the definition of what national interests are have been modified in a way that treats the petroleum sector as more—but by no means entirely—similar to other sectors. With the present domestic political picture combined with the liberal international economic regime, a strong state policy like the one of the 1970s and 1980s would only have been defined and implemented with much greater difficulty. In these circumstances, the companies with the most competence and capital at the time, namely, the IOCs, could possibly have dominated the sector.

Conclusion

To what extent can inferences be drawn from the Norwegian petroleum experience as a single case to the roles of state in other countries and sectors? Usually, the case that has the most similar attributes to a single case may be considered as its most relevant precedent. Similar attributes can be linked to the *material facts* of the case as well to the *appropriateness*, *reason*, and *generality* of the decisions (and policies) observed (Kennedy 1979, 673).[3]

Material relevance for the state in another country to the Norwegian case can, for example, be whether it is an oil-producing nation or a developed industrial nation, or both. No states are, however, confronted with precisely the same material facts as others. Klapp (1982, 1987) argues, for example, that there is a significant difference between developed and developing countries in how they are able to expand their national oil policies and state oil companies. Because poor countries have limited finances, the IOCs and banks have the pivotal power to limit the operations of those countries' NOCs. While developed countries can more easily resist the international pressure from the IOCs, these countries still face challenges because they generally have more domestic opposition, which determines the maneuvering room for their NOCs and interventionist policymaking.

As a consequence, developed countries may more easily generate more pluralistic national industry structures that coordinate domestic and international groups. Developed countries have a better chance of acquiring the industrial and organizational competences needed in the state apparatus and among politicians to find and sustain an optimal landlord–entrepreneur mixture in the oil sector as well as in the economy in general. Activist states that dynamically interact with markets and private enterprises are mostly seen in developed countries (e.g., Japan, Sweden) and in emerging economies such as China and Brazil, instead of poor oil-producing nations. Developed oil-producing nations that followed parts of the Norwegian example in the 1970s and 1980s (such as Canada, the United Kingdom) converted almost entirely into liberal regimes in the 1990s. Following the Norwegian experience, one may explain these changes more satisfactorily by pointing to changes in domestic policy (perhaps caused by international change), instead of international change itself.

The *appropriateness* of policy is linked to whether or not another state shares the liberal interventionist political attitude and ideology of Norwegian decision makers. In order to formulate a policy, one must study ideology and how states are bound in their policymaking by different cultures, histories, and path-dependent behaviors. The policy measures chosen by the Norwegian state include the combination of strong interventions and direct involvement along with more liberal, hands-off regimes for subparts of the enterprise. The questions remain whether states want to be active or passive in relation to the overall development of strategic sectors (i.e., whether they want to be at the helm) and whether they are able to combine dynamically various measures to reach their chosen goals (i.e., their reasons for the policy). To do this, a full program of nationalization could, in a specific political setting, be a viable solution, albeit with well-known capital, know-how, and technological deficiencies following over time. A full program of full liberalization where private business determines the industrial and political path would, on the other hand, exclude the state from taking a leading role in developments. For example, the states of Iran and Venezuela consider the establishment of a NOC to be highly appropriate, but this does not seem to be the case for the United States.

The *reason* for the policy can be a question of whether or not there is a formulation of a clear vision and goals for a national strategic industry. This is partly an ideological question. Orthodox and interventionist liberals may have significantly different opinions about what should be the goals for industrial policy. In the Norwegian case, it was important that the nation-state had a political vision of economic and social developments for the benefit of the "whole nation." A more orthodox economic approach would let markets more clearly define social goals (laissez faire in the extreme). A mixed-economy (Keynesian) approach emphasizes that the state should define social goals to a much greater degree than what would be the case in the neoclassical economic school. The issue may not primarily be that a state should have the same goals as other states but that the goals are clear and defined by the polity instead of by the market.

The *generality* of policy design relates to whether the approach can be used more widely in a liberal international economic regime, or at least in more than one sector in the country. In the neo-Schumpeterian understanding of trade and international competitiveness, the state should be proactive on the aggregated level (Hanusch and Pyka 2007). It is the state's relative ability (compared to the situation) both to develop policy and to define visions and preferences that is important. The goal of the state in its interactions with the industry concerned is always to stay one step ahead in negotiations, adaptations, and implementations of international agreements and of market and technological change, either directly or indirectly. The LME and CME types are thus, in this context, policy models on the sublevels of sectorial policy according to their contextual usefulness. Neither is a goal or proper measure for everything. For a strategic sector, possible direct state involvement should be complemented with a deliberate public policy targeted at the sector itself as well as its externalities, which include environmental and labor standards, the balance of domestic power, domestic industrial developments, foreign-policy implications, and so forth. State involvement may also be motivated by the aim to capture economic rent for the state itself (such as in the petroleum sector). This is different from situations where the state is confronted with sectors of only commercial significance, in which the role of the state is clearly more, or perhaps only, regulative in a liberal regime.

The question about generalization can also be asked negatively: What should be the reasons for inferences not being drawn from the Norwegian case to specific countries, sectors, and situations? It is important to note that the case has shown that the industrial-political "tool box" is not empty in a liberal economic regime. First, there is considerable room for a state to facilitate entrepreneurship in a noninterventionist way, in a way similar to the role of governments proposed by Porter (1990, 617–682). Second, beyond its regulative role, a state in a liberal regime can be an industrial actor itself through fully state-owned companies. Third, international regulations in many cases end up being more about form than substance, or " 'fuzzy liberalization' "(Andersen and Sitter 2009). Regulatory innovation is gradually recognized as an important tool used by the increasingly networked state (Black, Lodge, and Thatcher 2006). If the state limits itself to following an industrial and innovation policy for cases of "normal" commercial industries, this might not be appropriate for a situation when the economy experiences an exogenous shock, such as through the discovery of huge petroleum reserves or one where the aim is to retain a strategically important national industry. Infant industries that may not be developed as national as domestic companies may lose to better foreign companies at the outset. The control of strategic sectors may be lost or weakened in a mature phase through mergers and acquisitions by foreign companies, which have other concerns than that of the host nation's well-being. The case of Norwegian petroleum demonstrates that for a strategic national industry be competitively developed and retained and social goals reached, a strong, comprehensive and dynamic interaction between the state and industry, led by the state, may be necessary.

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Notes

1. A strategic sector is usually thought of as one that is essential for the economic and political stabilization and growth of a nation (Spencer 1986; Faustino and Silva 2001). However, what is actually considered essential in a single country may vary.
2. The resource curse paradox refers to the empirical fact that countries with an abundance of natural resources tend to have less economic growth than those without natural resources. The reasons could be a decline in the competitiveness of other economic sectors, caused by appreciation of the real exchange rate or high inflation (Dutch disease problems), or both; substantial price volatility on the resource; governmental mismanagement; or corruption. The term was first used by Auty (1993).
3. Charles Kindleberger (1973, 305) argued that a lesson from the Great Depression was that the international economy needs a stabilizer (a hegemon) to function over time. The depression as a concrete single case helped in the development of new concepts, typologies, and hypotheses, compared to the dominant classical school at the time. It was largely helpful in developing Keynesian-type national macroeconomic and regulated international trade and financial regimes after the war (Odell 2001, 165).

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