POL2022:
Petroleum Management, Political Economy and Ethics

FINAL EXAM

3. December 2018

The exam includes three components, each of which constitutes 1/3 of the final grade.

I. *Provide short (e.g., one paragraph) descriptions for each of the following five terms:*

- Panic Law of 1906.
  In 1906 the Norwegian Storting passed the Panic law (actually a series of laws) in 1906, which was expanded in 1909 and 1917). These laws regulated access to the acquisition of waterways in Norway and introduced the concepts of "escheat" and "hjemfallsrett" to waterfalls, mines, and other natural resources. These concepts allowed the state to regain ownership of natural resources after a period of private exploitation. These laws were only adopted after a lengthy political struggle and were intended to prevent large foreign companies from buying up and controlling hydropower and other Norwegian natural resources. When oil was eventually discovered, this legal framework was easily extended to the petroleum sector.

- Production Sharing Agreement
  Production sharing agreements (PSAs) or production sharing contracts (PSCs) are the most common type of contract signed between a government and a resource extraction company (or group of companies) concerning how much of the resource (usually oil) extracted from the country each will receive. In the oil sector, the first agreement was secured in Indonesia in 1966, and became a model for many subsequent contracts/agreements. PSAs differ from Concessionary agreement in that they allow the state to maintain more control over the resource. "Profit oil", "cost oil" and "total oil" are common terms associated with the PSA.

- Sliding Scale.
  A formula used by the Norwegian government to ensure that the government's participation share increased with the size of a field's productive capacity. As the size of production increased, so too did the Norwegian government's share (via Statoil). Introduced in the 3rd Allocation Round, dropped in the 10th (1985); it is no longer used.

- Ten Oil Commandments
  Crafted in 1971 by the national government's Standing Committee of Industry, the 10 commandments were unanimously agreed to in parliament and became the main steering mechanism for subsequent oil policies (proposed policies were juxtaposed against these 10 commandments):

  1. Ensure national governance and control of the entire activity on the Norwegian Continental Shelf.
  2. Exploit the petroleum deposits in such a manner that Norway minimizes its dependency of crude oil imports.
  3. Develop new business activities based on the petroleum sector.
  4. The development of the oil and gas industry must take necessary consideration to existing business and to the environment.

5. Flaring of valuable natural gas is not accepted on the Norwegian Continental Shelf, except for shorter test periods.
6. Petroleum from the Norwegian Continental Shelf shall as a main rule be shipped to Norway unless societal impact considerations require other alternatives.
7. The government shall be involved at all appropriate levels, contribute to the coordination of Norwegian interests within the Norwegian oil industry, and develop an integrated Norwegian petroleum environment with both national and international goals.
8. A state-owned oil company shall be established to secure the Government's economic interests, and to have a positive cooperation with national and foreign interests.
9. The activity north of 62 degrees shall satisfy the special societal impact conditions tied to this part of the country.
10.Future Norwegian petroleum discoveries may expose the Norwegian foreign policy to new challenges.

- Carried Interest
  When a working interest partner (most usually a NOC) in the exploration or development phase of a contract pays a share of costs and expenses that is disproportionally lower than its working interest share. Typically, NOCs are carried through the exploration phase, at which point the government takes up a working interest (or "backs in").

II. Respond to one of the following two essay questions:

- Is it ethical for Norway to continue pumping oil and gas out of the ground?
  This is obviously a difficult and contentious question, and there are many ways to respond to the question. In doing so, student should consider all the relevant variables, and explain their argument in a balanced and reasoned way. It is important that the candidate can demonstrate a familiarity with the reading, and use concepts/information from that reading to support the argument.

  In the book, we suggested that it was not ethical for Norway to continue, given our growing realization that substantial amounts of petroleum will need to stay in the ground if we are to avoid global warming. If we accept this constraint, the question is: Who should be responsible for the (limited) amount of oil that might legitimately (ethically) brought to market? Given Norway's wealth, I think an argument can be made that this opportunity should be left to less fortunate members of the global community (e.g., the developing world), but only if this production can be done in a way that protects the surrounding community and environment. In other words, it would not be ethical to stop petroleum extraction in Norway and encourage it in a context which ignores environmental protections and exacerbate social and economic inequalities. But if developing countries can manage the resource in a way that is as environmentally, socially and politically sensitive as the Norwegian authorities have done, *ceteris paribus,* then the more ethical production would be in the developing world. Absent that capacity to develop the resource in a politically, socially and environmentally sustainable manner, however, then Norwegian production remains ethical.

Or

- The number of National Oil Companies (NOCs) has increased significantly in the postwar period. Has this been a positive development for the host countries in question?

  This is a difficult question, in that the student should explain the need a country has for developing a commercial/operational competence (as part of the tripartite model), and that a NOC is one important means (but not the only means) of doing this. The benefits of a NOC is that it can be an important tool in developing local competence and local development (it is more likely to hire domestic firms). The costs of an NOC is the potential that it can become to powerful: a state within a state. These costs and benefits can be seen in the rise of Statoil, and Statoil's experience might be used to illustrate the response.

  Given the reference to the postwar period, we might expect students to talk about the changing international context, where states were grabbing power back from the Seven Sisters (powerful, private IOCs), and the need to secure a greater share of the rents for citizens. But one can question whether this has actually happened with many of the NOCs (witness Venezuela, Angola, etc.). It is important that the candidate can demonstrate a familiarity with the reading, and use concepts/information from that reading to support the argument.

III: You are asked to advise a corrupt government of an underdeveloped economy that has just discovered massive amounts of oil and gas. The president hopes to create a Sovereign Wealth Fund for the country. What would be your response/advice?

This question requires the candidate to define a sovereign wealth fund, and describe the many roles that it can play. This role is mainly about helping the country deal with significant and unexpected petroleum rents. In other words, a Fund can be seen as a way to protect the domestic economy from inflationary/appreciation forces, and provide a source of savings, when the price of oil fluctuates (as in inevitably does). It can also be a way to think of a way to protect the interests of future generations (ala Hotellings Rule), where the non-renewable resources are turned into an investment source with a dependable return stretching into the future. What is most important, in the context of a corrupt government and an underdeveloped economy, is a realization that a Fund may not be appropriate when it has real investment needs (it may be possible to spend the oil money in a way that can create long-term jobs and prosperity, without causing the inflation and appreciation that we associate with Dutch Disease) and it may be risky to build up a fund which can be easily ransacked by corrupt government officials. As in Norway, some discretion is required: to use the money from petroleum resources wisely, and corrupt officials cannot be trusted to do this, so significant backstops need to be put into place.

There are basically two types of funds: savings funds (e.g., saving for infrastructure, pensions, education, whatever) and stabilization funds (which are used to provide a countercyclical counter-weight for the economy—so that the domestic economy won't overheat or can spend its savings during periods of recession). The Norwegian GPFG combines elements of both types of funds.

The first (savings) funds doesn't do much more than a government budget post usually does, except that it stores the money offshore. This might be good for avoiding Dutch Disease, but the spending effect will kick in whenever the savings are (eventually) spent. Worse, by locating the money offshore, it may be easier for corrupt officials to get their hands on these funds. Strong answers will also note that many poor countries lack capital investment, and it would be a shame that this money is stored off shore if it could be spent in a responsible way at home to generate economic benefit, without fueling a real appreciation.

The second (structural) fund can be used to store money offshore, so it doesn't accelerate the real appreciation associated with Dutch Disease, and then return the money to the local economy when the price of oil drops—to ensure the government has stable access to funding. This kind of fund can be very useful for countries that depend heavily on natural resources, and are susceptible to the radical price swings that often affect the market.

Finally, strong responses might note that the utility of either fund in fighting Dutch Disease is not so much the existence of the fund, per se, but how the money is repatriated. Hence, in Norway, the "handlingsregel" (budgetary rule) should get most of this honor, not the GPFG. As with the other essay questions, it is important that the candidate can demonstrate a familiarity with the reading, and use concepts/information from that reading to support the argument.