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Managing Political and Investment Risk in the International Oil and Gas Industry

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**MANAGING POLITICAL AND INVESTMENT RISK IN THE
INTERNATIONAL OIL AND GAS INDUSTRY**

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**A Dissertation Submitted to the Graduate School at
The University of Missouri - St. Louis in
partial fulfillment of the requirements for the degree
Doctor of Philosophy in Political Science**

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Abstract

Many practitioners and academics have argued that the risk of investing in international markets has increased in the last ten years; and that the greater the real or perceived risk of an investment, the less likely it is that a particular investment will be made.

The effectiveness with which these risks are managed in the oil and natural gas industry are important for several reasons. First, oil and natural gas are essential for sustaining current economic activity and promoting economic growth. Second, the balance between supply and demand determines the price of oil and natural gas and their impact on the economies of all nations. Therefore the price and availability of oil and natural gas are also matters of national security. Third, the search for a secure supply of oil and natural gas affects the political, military and economic relations between countries.

This study addresses four questions. What institutions and strategies are available for managing political and investment risk in the international oil and gas industry? How and when did they develop? In what circumstances is each used? How effective have they been?

The institutions available for managing risk include oil and gas exploration contracts, domestic courts, national constitutions, bilateral investment treaties, multilateral investment treaties, governmental and non-governmental regulatory agencies and international energy forums. The organizations that manage uncertainty and risk include international oil companies, oil service companies, national oil companies, and public and private providers of financial capital and insurance. Their strategies include corporate finance, joint ventures, project finance, alliances and energy diplomacy.

This study supports the view that existing institutions change and new institutions are created when organizations perceive that a change in the status quo will enhance the profitability of existing projects and make new projects economically feasible. However, the process by which these institutions are created and evolve is easier to describe in theory than it is to explain in practice, because institutional development takes place in small steps; and frequently involves several organizations, some trying to change the existing institutional environment and others trying to preserve it.

Finally, the institutions supporting the international oil and gas industry can be arranged in a hierarchy based on their relative importance. Contracts, informal relationships and transparency are the most important institutional mechanisms used by international oil and natural gas companies to manage risk. The second line of defense includes domestic law, bilateral treaties, and international courts and tribunals. A third line of defense includes multilateral treaties and international forums.

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Chapter 1- Introduction

1.1 Statement of the Problem

Many practitioners and academics have argued that the risk of investing in international markets has increased in the last ten years. The evidence cited for this conclusion include: (1) the Arab Spring and its aftermath and more recently the military conflicts in Syria and Iraq, which demonstrate the risks associated with even seemingly stable regimes (2) forced contract renegotiations and expropriations in the mining, oil and natural gas sector in several resource-rich countries (Venezuela, Argentina and Russia) and (3) recurring financial crises and the need for more regulation of financial organizations (for example, Basel II and III, Solvency II). More generally, after a period of relatively low investment claim losses, there is a renewed awareness that investment risk, driven by political events, is still difficult to predict.¹

This is particularly true in the international oil and natural gas industry in which there is often a shift in bargaining power over the life of a project between the nation supplying the natural resource, the transit countries through which the export pipeline passes, and the multinational companies providing the financial capital and technical expertise needed to develop and export the resource. Until exploration is completed and the field development facilities and pipeline infrastructure are built, superior bargaining power lies with the multinational companies, because the host government often does not have the financial, technical, and marketing resources needed to find and produce the oil and natural gas. However, after the investment in the facilities and export infrastructure have been made by the foreign investors, the bargaining power shifts to the host government and the transit countries, because they have the power to interrupt operations, pass legislation that impairs the value of the investment or in the worst case, expropriate the project assets.²

In addition, oil and gas projects often extend over several decades. During that time, the host government and its economic policy and political ideology may change. Consequently, what the host government and transit countries previously considered attractive financial terms, may

¹ Multilateral Investment Guarantee Agency, *World Investment and Political Risk*, World Bank Group (Washington, DC 20433, 2012), p. 42

² David Wood, *Petroleum Economics, Risk and Opportunity Analysis*, Chapter 10 in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013), p. 243

no longer meet their expectations. Raymond Vernon described this phenomenon as an “obsolescing bargain”.³ The new regime may demand larger financial returns than originally agreed, from what have become, mature, low risk projects. The demands usually take the form of forced contract renegotiation, increased fiscal take or expropriation.⁴

The inclination of host governments to demand more favorable terms, are not just observed in developing countries. For example: (1) the state of Alaska has increased the financial burden levied on oil investors several times since the commissioning of the TAPS (Trans-Alaska Pipeline System) in 1977. More recently, the ACES (Alaska’s Clear and Equitable Share) fiscal system implemented in 2007, significantly increased the fiscal take from the oil companies.⁵ (2) The government of the United Kingdom increased the corporate tax on North Sea oil producers (termed supplemental corporation tax) three times between 2002 and 2011, placing an increased fiscal burden on oil companies operating mature oilfields with declining production. (3) In the OECD countries (Organization for Economic Cooperation and Development), asset expropriation is rare and tax increases are usually not made on a retroactive basis, but in the developing world, outright expropriation and the forced acceptance of onerous financial terms by investors were still common between 2000 and 2010, for example, in Algeria, Ecuador, Kazakhstan, Russia, Argentina and Venezuela.⁶

1.2 Importance of the Problem

The effective management of these risks is important for several reasons. First, oil and natural gas are essential for sustaining current economic activity and promoting economic growth. Second, the balance between supply and demand determines the price of oil and natural gas; and their impact on the economies of all nations. Therefore the price and availability of oil and natural gas are also matters of national security. Third, the search for a secure supply of oil and

³ Raymond Vernon, *Sovereignty at Bay: The Multinational Spread of US Enterprises*, (New York: Basic Books., 1971)

⁴ David Wood, *Petroleum Economics, Risk and Opportunity Analysis*, Chapter 10 in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013) p. 242

⁵ Dan E. Dickinson and David Wood, “Alaska Tax Reform: Intent Met with Oil” (Part 1 of 2), *Oil & Gas Journal*, May 25, 2009, 20-24.; Dan E. Dickinson and David Wood, “Alaska Tax Reform: Gas Raises Questions” (Part 2 of 2), *Oil & Gas Journal*, June 1, 2009, 20-26.

⁶ David A. Wood, “Long Term Fiscal Contractual Stability Proves Elusive, Part 1”, *Petroleum Review*, February 2005, 38-42.; David A. Wood, “Long Term Fiscal Contractual Stability Proves Elusive, Part 2.” *Petroleum Review*, April 2005, 44-48.

natural gas affects the political, military and economic relations between countries. Consequently, every developed and developing country has placed energy policy at or near the top of its national priorities.

Supply and Demand

World consumption of petroleum liquids (crude oil and liquefied petroleum gas (LPG)), has increased from 63.1 MBPD (million barrels per day) in 1980 to 90.5 MBPD in 2013.⁷ The consumption of petroleum liquids is expected to increase from 90.5 MBPD in 2013 to 115.0 MBPD in 2040 (Table A.1). The production of petroleum liquids is expected to increase from 90.1 MBPD⁸ (Table A.2) in 2013 to 96.6 MBPD by 2020 and 115.0 MBPD in 2040. These forecasts are based on the assumption that the price of crude oil rises to \$106 per barrel in 2020 and \$163 per barrel in 2040.⁹

Increasing oil production from 90.5 MBPD in 2013 to 115.0 MBPD in 2040 would be challenging even if the world's existing and future reserves were under the control of oil importing nations, however sixteen of the twenty largest oil companies are national oil companies (NOCs); and Saudi Arabian Oil Company, Saudi Arabia's national oil company, controls ten times the reserves that ExxonMobil does.¹⁰ NOCs own between 73% and 90% of the world's oil reserves and accounted for 61% of oil production in 2012. NOCs also own 68% of the world's natural gas reserves and account for 52% of natural gas production.¹¹ The U.S. Energy Information Administration's (EIA) reference case projects that OPEC production will increase slightly in absolute terms, but decline in relative terms from 61% of world production in 2012, to somewhere between 39% and 43% of total global liquids production by 2040.¹² In addition, an estimated 60% of the world's undiscovered reserves are likely to be in countries, in

⁷ U.S. Energy Information Administration, http://www.eia.gov/forecasts/steo/report/global_oil.cfm, EIA, September 9, 2014

⁸ Ibid

⁹ U. S. Energy Information Administration, *Annual Energy Outlook 2013 with Projections to 2040* (Washington, DC: EIA, 2013), p. 31

¹⁰The Economist, "Really Big Oil, National Oil Companies", August 10, 2006 referenced in Andrew Inkpen and Michael Moffett, *The Global Oil and Gas Industry – Management, Strategy & Finance* (Tulsa, OK: PennWell Corporation, 2010), p. 52

¹¹ David G. Victor, David R. Hults and Mark C. Thurber, *Oil and Governance – State-Owned Enterprises and the World Energy Supply* (New York, NY: Cambridge University Press, 2012), p. 3

¹² U. S. Energy Information Administration, *Annual Energy Outlook 2013 with Projections to 2040* (Washington, DC: EIA, 2013) p. 31

which the domestic NOC has essentially exclusive access to onshore and offshore oil prospects in its home country.¹³ NOCs are therefore of great importance to their country's economy; to the energy security of importing countries; and the balance between supply and demand. Figure A.1 presents the historical record of oil prices from 1861 through 2013, before and after adjusting for inflation.

Global capital expenditures and exploration expense (CAPEX) in the exploration and production sector of the oil and gas industry are expected to increase from \$682 billion in 2013 to \$723 billion in 2014.¹⁴ The increase in CAPEX has been driven by increasing exploration and production activity in deep and ultra-deep offshore areas and the continuing strong demand for oil and natural gas.¹⁵ However, the price of West Texas Intermediate (WTI) has declined from approximately \$106 per barrel in June 2014 to \$56 per barrel at the end of 2014. Consequently, CAPEX in 2015 is expected to decline to \$571 billion. This level of expenditures assumes that the average price of WTI in 2015 rebounds to \$70 per barrel.¹⁶ On January 5, 2015 the spot price of WTI was \$50.05 per barrel.

The amount of financial and physical capital involved in oil and natural gas exploration make them particularly vulnerable to the obsolescing bargain. Consequently, as the risk of contract renegotiation and expropriation increases, investments in oil and natural gas that would otherwise be made will not be made; reducing the supply and increasing the price of oil and natural gas. This risk can be reduced or reallocated by the development of appropriate institutions. Understanding how these institutions can and do reduce risk is important to developed and developing countries for several reasons.

¹³ Silvana Tordo, Brandon S. Tracy and Noora Arfaa, *National Oil Companies and Value Creation*, World Bank, Working Paper 218, (Washington, DC: 2011), p. xi

¹⁴ Barclays, Global 2014 Capital Spending Outlook, December 9, 2013, <http://www.pennenergy.com/content/dam/Pennenergy/online-articles/2013/December/Global%202014%20EP%20Spending%20Outlook.pdf>

¹⁵ PR Newswire Services, "Global Oil and Gas CAPEX to Increase to \$1,201 Billion in 2013," <http://www.prnewswire.com/news-releases/global-oil-and-gas-capex-to-increase-to-1201-billion-in-2013-187890961.html>

¹⁶ Oil & Gas Journal, "Sharp drop expected in global E&P spending in 2015, study says", Oil & Gas Journal, January 8, 2015, <http://www.ogj.com/articles/2015/01/sharp-drop-expected-in-global-e-p-spending-in-2015-study-says.html?cmpid=EnlDailyJanuary82015>

First, most of the “easy oil” has been found and is being depleted through production by the NOCs. Second, the Saudi Arabian Oil Company is operating close to maximum production capacity, 11.5 MBPD, and will eventually be unable to act as a “swing” producer, that is, a producer that can increase production when oil supplies are “tight” to ensure a balance between supply and demand, and the stability of the price of oil.

Third, the periodic resurgence of resource nationalism in democratic oil exporting countries like Mexico and Venezuela; and the policies of more authoritarian regimes like Russia to retain or regain control of their oil and natural gas resources is a continuing threat to direct foreign investment and reduces the opportunities for IOCs (international oil companies) to explore for oil and natural gas.

Fourth, IOCs possess technology that could be used successfully in countries that rely almost exclusively on their national oil companies (NOCs) for exploration and production technology. Because the NOCs and their governments have been reluctant to allow the international oil companies (IOCs) to explore in their countries, the IOCs have been forced to engage in exploration in more difficult environments, for example, ultra-deep water and the Arctic Circle where exploration and production cost and technological risk are much higher.

Fifth, many national oil companies, for example, *Petroleos Mexicanos* (PEMEX) in Mexico, *Petroleos de Venezuela* (PDVSA) in Venezuela and the National Iranian Oil Company (NIOC) in Iran have not reinvested enough of their oil and gas revenue in the discovery of new oil and natural gas reserves to replace the reserves that are being depleted. Sixth, the inability of most NOCs to focus exclusively on commercial objectives and the absence of a true bottom line have frequently led to the mismanagement of financial resources.

Seventh, the lack of transparency in the operation and financial performance of many national oil companies makes private sector lenders reluctant to lend to these NOCs, consequently not all sources of capital are available to national oil companies. Eighth, international law provides limited enforcement mechanisms as a deterrent to the expropriation of assets owned by IOCs in developing countries, or to the unilateral abrogation of agreements between host countries and international oil companies.

1.3 Purpose of the Study

The challenges created by these issues can be met to varying degrees by the development of appropriate institutions. Understanding how these institutions have developed and how effective they have been in managing political and investment risk is important to the economic efficiency of the oil and natural gas industry and to the world economy. In addition, understanding the development of and the role played by institutions in the oil and natural gas industry can expand our knowledge of institutional development, economic history and political development in general.

1.4 Defining Risk

Risk is frequently understood to mean the possibility of failure or loss, but it is better understood as a dispersion or range of the possible outcomes. Risk is therefore a measure of the degree of uncertainty or variability of outcome and does not necessarily reflect a high probability of failure or loss.¹⁷ This definition is applicable to political risk as well as commercial and financial risk.

In the upstream sector of the petroleum industry (exploration and production) risk can be divided into two major categories, below ground risk and above ground risk. Below ground risk includes resource uncertainty, technical uncertainty and environmental uncertainty. Resource uncertainty refers to the presence or absence of oil and natural gas in a specific drilling prospect, it is either there or it is not (a discrete uncertainty); and the amount of oil and natural gas, if a discovery is made (a continuous uncertainty). Technical uncertainty refers to the potential, but unknown engineering problems that may be encountered in producing the oil or gas. Environmental uncertainty refers to the potential for accidental damage to land or marine life. Above ground risk includes adverse changes in economic conditions (intentional or unintentional), the inability to enforce the terms of a contract, changed fiscal terms imposed by the host government (division of revenue), resource nationalism, discriminatory regulatory behavior and the placement of geopolitical considerations (national security, energy security, and political alliances) above legal and financial commitments. Table A.3, in Appendix I presents a more complete list of risks and uncertainties in the oil and natural gas industry.

¹⁷ David Wood, *Petroleum Economics, Risk and Opportunity Analysis*, Chapter 10 in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013) p. 239

1.5 Foreign Direct Investment and Portfolio Investment

Lipson (1985) noted that “until recently...portfolio investments [debt] and direct investment [equity] had long shared roughly similar treatment [levels of protection]. They could be characterized jointly in a single regime governing all foreign capital”.¹⁸ He traced the divergence to the late 1960s, when expropriations proliferated, but debt renunciation (and default more generally) did not. He concluded that “*The fundamental difference is the better institutionalization of international finance* [emphasis in the original]. The answer lies in two basic differences between the network of international lending and equity investments [foreign direct investment]”.¹⁹ First, multinational corporations have largely independent interests in expropriation disputes, but financial organizations have joint interests because of the network of interbank liabilities. Second, because the interests of direct investors are separable, their home governments have less incentive to become involved in one another’s expropriation disputes.²⁰

This is an important consideration for two reasons. First, the question arises whether two regimes still exist almost 30 year later. Second, if two different regimes do exist, then a choice must be made between studying the “debt” regime, the “equity” regime or both. In this study, the emphasis is on the foreign direct investment regime (equity) in the international oil and natural gas exploration industry. This includes an analysis of the recent record of expropriation, major deals and alliances between IOCs, NOCs and host country governments; recent disputes between IOCs, NOCs and host governments; recent adjudications of disputes; and the recent record of compliance with such arbitration rulings and court decisions.

1.6 Plan of the Dissertation

Chapter 2 outlines the central research question and subsidiary research questions to be answered in this study. Chapter 3 reviews previous research on the development and role of institutions and organizations in theory and practice. Chapter 4 describes the research design used in the study. Chapter 5 describes the research methods. Chapter 6 describes the research findings. Chapter 7 presents six case studies which are compared to the observations and conclusions in

¹⁸ Charles Lipson, *Standing Guard – Protecting Foreign Capital in the Nineteenth and Twentieth Centuries* (Los Angeles, CA: University of California Press, 1985), p. 170

¹⁹ Ibid

²⁰ Ibid, p. 174-175.

Chapter 6. These cases are consistent with the conclusions reached in Chapter 6. Chapter 8 presents a summary, conclusions and proposals for future research.

Chapter 2 - Research Questions

2.1 Central Research Question

The evaluation of political and investment risk have always been a part of exploring for oil and natural gas, however, the role played by institutions in managing this risk, has frequently been subsumed in this political and investment analysis. Second, although books have been written on how petroleum law²¹ and international investment treaties²² can be used in theory to manage risk, less attention has been given to (1) how and when these institutions developed, (2) the extent to which international oil companies, national oil companies, oilfield service companies and host governments have used these institutions and (3) how effective they have been in managing risk. This study examines these questions.

2.2 Subsidiary Questions

Question #1

What evidence, if any, exists that the frequency of expropriation of foreign direct investment has increased in the oil and natural gas industry; and under what circumstances is it more or less likely to occur?

Question #2

Not all disputes between host countries and IOCs are related to expropriation. In fact, most disputes are the result of a disagreement regarding the terms and conditions of a contract or some unanticipated event. This raises three questions. (1) How frequent are investment disputes, (2) How are these disputes usually resolved and (3) What circumstances are more or less likely to lead to disputes?

Question #3

What contract provisions are most often included in a contract to limit the number of disputes and resolve those that occur?

²¹ Ernest E. Smith, John S. Dzienkowski, Owen L. Anderson, John S. Lowe, Bruce M. Kramer and Jacqueline L. Weaver, *International Petroleum Transactions*, Third Edition, (Rocky Mountain Mineral Law Foundation, 2010)

²² Andrew Newcombe and Lluís Paradell, *Law and Practice of Investment Treaties: Standards of Treatment*, (Kluwer Law International, 2009); Kenneth J. Vandavelde, *Bilateral Investment Treaties: History, Policy, and Interpretation* (USA: Oxford University Press, April 8, 2010)

Question #4

What are the primary clauses in a bilateral investment treaty and how effective have they been in resolving disputes?

Question #5

Are countries that have signed a large number of bilateral investment treaties less likely to be involved in investment disputes in an international court or tribunal? Are countries with more reliable legal systems as measured by government effectiveness, regulatory quality, rule of law, and control of corruption less likely to be involved in disputes in an international court or tribunal?

Question #6

Does a relationship exist between the amount of oil a country consumes and the number of bilateral treaties it has signed? Does a relationship exist between the FDI outflows from a country, the FDI inflows to a country and the number of bilateral investment treaties it has signed? Are the rulings of most courts and tribunals fair and are they complied with?

Question #7

What sources of capital are available to finance oil and gas exploration and development? What financing structures are available? What business structures are available? Do alliances offer any advantages in managing risk and how politically feasible are they?

Question #8

What financial instruments are available for managing risk after a project is in operation?

Question #9

What is financial reporting quality and transparency? Can financial reporting quality be measured and if so how? Does financial reporting quality matter from a theoretical perspective? Does financial reporting quality matter from a practical perspective? Does the quality of financial reporting affect the amount of foreign direct investment in a country?

Question #10

How important are multilateral treaties in the oil and gas industry? How important are international energy forums? Who is responsible for the quality of financial reporting in the international environment? How have signature bonuses affected NOCs, IOCs and host governments? What is energy diplomacy and does it matter in the competition for oil and natural gas? How do countries balance foreign direct investment and national security? These questions are addressed in Chapter 6.

Chapter 3 - Previous Research

3.1 *Institutions and Organizations in Theory*

In its classical economic formulation, markets are assumed to be efficient in the absence of regulation. In its neoclassical formulation, markets are thought to work most of the time, but may require minimal regulation to maintain an orderly market. The basic assumptions of classical and neoclassical economics are: (1) people have rational preferences among outcomes that can be identified and assigned a value, (2) individuals maximize their utility and firms maximize their profits, (3) people act independently on the basis of full and relevant information,²³ and (4) the classical and neoclassical economic models assume that capital is optimally allocated through the action of markets and prices.

Another approach to economics in general and political economy in particular is the “new institutional economics”. New institutional economics (NIE) has its origin in two articles by Ronald Coase, *The Nature of the Firm* (1937) and *The Problem of Social Cost* (1960). Institutional economists work within a modified neoclassical framework, which includes consideration of efficiency, that is, transaction and distribution costs.²⁴

The NIE approach differs from neoclassical economics in several ways. First, it rejects the assumption that people act independently on the basis of full and relevant information. Institutional economists argue that decisions are made on the basis of less than complete and accurate information, because the acquisition of information involves costs in time and money and both are constraints. Second, engaging in transactions involves the incurrence of transaction costs and transaction risk, which influence the decision making process and therefore the decision. Third, the two preceding points make a formal system of rules desirable because formal rules lower information and transaction costs, and reduce the risk associated with a particular transaction. The issues addressed by institutional economics include: organizational arrangements, property rights,²⁵ transaction costs,²⁶ credible commitments, modes of governance, persuasive abilities, social norms, ideological values, decisive perceptions, gained control,

²³ E. Roy Weintraub. The Concise Encyclopedia of Economics, “*Neoclassical Economics*.”
<http://www.econlib.org/library/Enc1/NeoclassicalEconomics.html>

²⁴ Oliver E. Williamson, *Markets and Hierarchies, Analysis and Antitrust Implications: A Study in the Economics of Internal Organization* (Free Press, 1983)

²⁵ Dean Lueck, *The New Palgrave Dictionary of Economics*, 2nd Edition, 2008, “property law and economics.”

²⁶ M. Klaes, *The New Palgrave Dictionary of Economics*, 2nd Edition, 2008, Abstract. “History of Transaction Costs”,

enforcement mechanisms, asset specificity, human assets, social capital, asymmetric information, strategic behavior, bounded rationality, opportunism, adverse selection, moral hazard, contractual safeguards, surrounding uncertainty, monitoring costs, incentives to collude, hierarchical structures, and bargaining strength.

The two principal classes of participants in the institutional economic framework are institutions and organizations. There are no universally accepted definitions for the terms “institution” and “organization”, but most scholars working within the NIE framework follow Douglass North's definitions. Institutions are the "rules of the game", consisting of both the formal legal rules and the informal social norms that govern individual behavior and structure social interactions.

Institutions are the humanly devised constraints that structure political economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights). Throughout history, institutions have been devised by human beings to create order and reduce uncertainty in exchange. ... They evolve incrementally, connecting the past with the present and the future; history in consequence is largely a story of institutional evolution in which the historical performance of economies can only be understood as a part of a sequential story.²⁷

Organizations are those groups of people and the governance arrangements they create to coordinate their group action against other groups also performing as organizations, for example, business firms, universities, clubs, medical associations, and unions.²⁸ These definitions will be used throughout this study.

Coase, North, Williamson and others argue that the role of institutions has been underestimated and that institutions are not a neutral or unchanging background against which rational individuals and organizations make decisions. Rather institutions “together with the standard constraints of economics ... define the choice set and therefore determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity”.²⁹ Institutions not only define the “choice set”, but also influence organizations, consequently changing both the organizations and the institutions over time. “Incremental change comes from

²⁷ Douglass C. North, “Institutions”, *Journal of Economic Perspectives*, Vol. 5, No. 1, Winter (1991): 97-112

²⁸ *Ibid*, p. 97

²⁹ *Ibid*, p. 97

the perceptions of the entrepreneurs in political and economic organizations that they could do better by altering the existing institutional framework at some margin”.³⁰

Institutions (contracts, domestic laws, treaties, international law, formal rules and informal customs) and the entities that implement them (regulatory agencies, financial exchanges, non-governmental agencies and inter-governmental agencies) are involved in virtually every stage of the oil and gas exploration, development and production process. This involvement extends beyond the neoclassical assumptions regarding rules and regulations needed to maintain an orderly market and includes laws regarding capital formation, ownership structure, foreign direct investment, capital allocation, domestic and international product pricing, taxation, capital repatriation and social service expenditures.

Although it might be possible to discuss institutions in this study without discussing the types of organizations, the influence of institutions on specific organization and the influence of these organizations on specific institutions will be clearer if organizations are explicitly discussed. The decision to include organizations in the analysis is also driven by North’s observation that “institutions do not emerge spontaneously to create and nurture the market, but rather reflect the interests of those players [organizations] in a position to put them in place”.³¹ Therefore, how energy exporting and energy importing countries define their short term and long term interests and how they relate those interests to other aspects of their energy, international security and climate agenda will determine the direction that institutional development takes.³²

3.2 Institutions in Practice

The institutions employed in practice include: (1) national constitutions, domestic law, international law, bilateral and multilateral investment agreements (e.g. North American Free Trade Agreement (NAFTA), the Energy Charter Treaty (ECT), and the International Centre for the Settlement of Investment Disputes), courts and tribunals, (2) contract provisions, partnership structures, financing structures and political risk insurance; and (3) institutions promoting

³⁰ Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, UK: Cambridge University Press, 1990), p. 8

³¹ Ibid, p. 79 - 80

³² Albert Bressand, *The Future of Producer-Consumer Cooperation: A Policy Perspective*, Chapter 13 in Andreas Goldthau and Jan Martin Witte, editors, *Global Energy Governance – The New Rules of the Game* (Berlin: Global Public Policy Institute, 2010) p. 283-284

transparency, for example, the Securities and Exchange Commission (SEC), the International Accounting Standards Board (IASB), Financial Accounting Standards Board (FASB), and the Society of Petroleum Engineers (SPE). A detailed discussion of the development and operation of the institutions used by the oil and natural gas industry is presented in Chapter 6.

3.3 Organizations in Practice

The organizations in the international oil and gas industry can be divided into three broad categories: (1) national governments (2) national oil companies and (3) international oil companies. The next three sections examine the politics, policies, and objectives of each of these types of organizations.

3.3.1 National Governments

National governments are the representatives of the people and therefore, at least in theory, act to enhance the welfare of the people in that country. In countries exporting oil and natural gas, this principally consists of the development of energy policy related to the discovery, production and sale of oil and natural gas. Energy policy includes approving the organizations that will be granted drilling rights in the country, the rate of production allowed, and the division of revenue between the national government and the IOCs or foreign NOCs operating in the country. The investment policy of national governments can change over time and this represents in the broadest sense the risk to foreign direct investment. This section examines the politics, policies and objectives of some of the larger oil exporting countries and their governments.

Saudi Arabia

Saudi Arabia possesses almost one-fifth of the world's proved oil reserves and is the largest exporter of petroleum liquids in the world. In 2013, Saudi Arabia produced an average of 11.592 MBPD (million barrels per day) and exported an estimated 8.731 MBPD of petroleum liquids. Far East Asia received approximately 54 percent of Saudi Arabia's crude oil exports and the majority of its refined petroleum products and natural gas liquids (NGL) exports. In 2013, Saudi Arabia exported an average of 1.326 MBPD of petroleum liquids to the United States, which accounted for 21.4% of total U.S. petroleum imports. Saudi Arabia's economy remains heavily dependent on petroleum exports. Petroleum exports accounted for almost 90 percent of Saudi

Arabia's total export revenues in 2011, according to the Organization of Petroleum Exporting Countries' (OPEC) Annual Statistical Bulletin 2012.³³

The state oil company, Saudi Arabian Oil Company, has exclusive rights to explore for and produce oil and natural gas in the country. Saudi Arabia's Ministry of Petroleum and Mineral Resources and the Supreme Council for Petroleum and Minerals have oversight of the Saudi Arabian Oil Company and the oil and natural gas industry. The Supreme Council, which is composed of members of the royal family, industry leaders and government ministers, is responsible for petroleum and natural gas policy, including contract review and long term strategic planning. Saudi Arabian Oil Company's financial performance is ranked in the upper middle classification, one level below Statoil and Petrobras, which are considered the two best managed NOCs and one level above *Petroleos de Venezuela S.A* (PDVSA) and *Petroleos Mexicanos* (Pemex).³⁴

Viewed from the outside, internal politics do not appear to be an obstacle to the formation and implementation of a consistent energy policy in Saudi Arabia. In addition, Saudi Arabia's policies and production level have been consistent with its public statements, that is, to provide enough oil to maintain the world price of oil at a level that will not lead to a global recession. However, the spot price of crude oil (West Texas Intermediate) has declined from \$106 per barrel in June 2014 to \$56 per barrel at the end of December 2014. Given the significant reduction in the price of crude oil, Saudi Arabia might have been expected to reduce its production to bring the global supply of oil into balance with demand. However, Saudi Arabia has continued to produce oil at its prior level. There are several possible reasons why Saudi Arabia has continued to produce at its previous level. First, Saudi Arabia may not want to reduce its market share of crude oil exports relative to other countries, particularly those countries in OPEC. Second, Saudi Arabia's marginal cost of oil production is significantly lower than other countries within and outside of OPEC. They can therefore operate at a profit even at substantially lower oil prices. Third, they may want to discourage the production of unconventional oil and gas (shale oil and shale gas) in the United States and Canada. Fourth, they may want to put economic and fiscal

³³ U.S. Energy Information Administration, *Saudi Arabia*, EIA, February 26, 2013, p. 1

³⁴ David G. Victor, David R. Hults and Mark Thurber, *Oil and Governance – State-owned Enterprises and the World Energy Supply* (Cambridge: Cambridge University Press, 2012), p. 898

pressure on the Shia dominated governments of Iran and Iraq who have from time to time sought hegemony in the Middle East.

Russia

In 2013, Russia produced an average of 10.498 MBPD of petroleum liquids and exported an estimated 7.201 MBPD, making it the third-largest producer of oil (after the United States and Saudi Arabia). Russia was the second-largest producer of natural gas in 2012 (after the United States). In 2012, the state owned company *Rosneft* produced 2.448 MBPD, 23.7% of Russia's oil production of 10.315 MBPD and LUKoil, a private company, produced 1.670 MBPD, 16.2% of Russia's oil production.

The state-owned company, *Gazprom* dominates Russia's upstream gas industry, producing approximately 74% of Russia's total natural gas output. *Gazprom* also controls most of Russia's natural gas reserves. More than 65% of proved reserves are directly controlled by the company and additional reserves are controlled by *Gazprom* through joint ventures with other companies.³⁵

After the dissolution of the Soviet Union in 1991, Russia privatized its oil industry by selling state-owned companies to private investors. Beginning in the late 1990s, a small number of private sector companies drove growth in the oil sector and several international oil companies attempted to enter the market, with varying degrees of success. Although foreign companies can invest in Russia, the investment is generally made in partnership with a Russian company, usually *Rosneft* if the investment is in the oil sector and *Gazprom*, if the investment is in the natural gas sector.³⁶

Several ministries are involved in the oil and gas sector. The Ministry of Natural Resources issues field licenses, monitors compliance with license agreements, and levies fines for violations of environmental regulations. The Ministry of Finance is responsible for tax policy in the energy sector, and the Ministry of Economic Development is responsible for regulations of tariffs and energy sector reforms. The Ministry of Energy oversees energy policy formulation and enforcement. Within these ministries, regulatory agencies involved in the sector include the

³⁵ U.S. Energy Information Administration, *Russia*, EIA, November 26, 2013, p. 6-7

³⁶ *Ibid*, p. 10

Federal Energy Commission (oil transportation tariffs), the Commission for State Policy on the Oil Market (formulates policy for regulating oil and oil product markets), and the Commission on Protective Measures in Foreign Trade and Customs and Tariff Policy (sets crude oil export tariffs).³⁷

Since 1999, the Russian oil and gas industry has undergone renationalization. Russia's tax and environmental regulatory agencies have been instrumental in helping to affect this renationalization. This is discussed in more detail in the case study of TNK-BP in [Chapter 7](#). Russia's energy policy is directed at two objectives, (1) the use of oil and gas export revenue to develop the domestic economy and (2) the use of oil and gas exports to create and maintain political alliances with countries bordering Russia. A combination of economic sanctions imposed on the Russian economy by the United States and its coalition partners in response to Russia's annexation of Crimea and its incitement of and assistance to Russian separatists in Eastern Ukraine; the decline in the spot price of crude oil (West Texas Intermediate) from \$106 per barrel in June 2014 to \$56 per barrel at the end of December 2014 and the country's heavy reliance on oil and gas exports for foreign exchange reserves have led to a run on the *ruble* and are likely to lead to a recession in Russia in 2015.

Venezuela

In 2013, Venezuela produced an average of 2.489 MBPD and exported an estimated 1.712 MBPD of petroleum liquids. *Petroleos de Venezuela* (PDVSA) is the largest employer in Venezuela and accounts for a significant portion of the country's GDP, government revenue, and export earnings.

During the 1990s, Venezuela took steps to liberalize its petroleum sector. In 1999, Venezuela passed the Gas Hydrocarbons Law, which was intended to diversify the economy by promoting natural gas development and expanding the role of natural gas in Venezuela's energy sector. This legislation allowed private operators to own 100 percent of natural gas projects, in contrast to the ownership rules in the oil sector which required that Venezuela own a majority interest in all new

³⁷ Ibid, p. 6-7

oil projects. The Gas Hydrocarbons Law also reduced royalty and income tax rates on natural gas projects relative to the rates applied to oil projects.³⁸

However, after the election of President Hugo Chavez in 1999, the Venezuelan government continuously increased its involvement in the oil industry.³⁹ In 2002, almost half of PDVSA's employees went on strike in protest against the policies of President Chavez and his administration, essentially bringing the company's operations to a halt. After the strike, PDVSA fired 18,000 employees and restructured the organization to strengthen the government's control over the company and increase the loyalty of middle and upper management. In 2006, President Chavez initiated the nationalization of oil exploration and production in Venezuela, by mandating the renegotiation of ownership of all projects and giving PDVSA a minimum of 60% ownership in all oil and gas projects (old and new).⁴⁰

In 2007, President Chavez announced a public referendum on several proposed constitutional amendments, one of which would have entitled the state to a controlling ownership position in all new natural gas projects, similar to a constitutional law governing the oil sector. However, Venezuelan voters defeated the referendum in December 2007.⁴¹ Chavez successor, Nicolas Maduro, was elected President of Venezuela on April 15, 2013 and has continued the policies of his predecessor.

Mexico

In 2004, Mexico produced an average of 3.848 MBPD of petroleum liquids and exported an estimated 1.792 MBPD of petroleum liquids. In 2013, Mexico produced an average of 2.908 MBPD of petroleum liquids and exported an estimated .803 MBPD of petroleum liquids.

In early December 2013, after years of state ownership and declining production, Mexico's President Enrique Pena Nieto proposed significant energy reforms. On December 12, 2013 the Mexican Senate passed a new law with 95 votes in favor and 28 votes against, allowing domestic and foreign companies to explore and develop oil fields, for the first time since 1938. This

³⁸ Ibid, p. 9

³⁹ U.S. Energy Information Administration, *Venezuela*, EIA, October 2012, p. 3.

⁴⁰ Ibid, p. 3

⁴¹ Ibid, p. 9

legislation was subsequently referred to the lower Mexican Chamber of Deputies where it was approved by a vote of 345 in favor and 134 against. President Pena Nieto signed the energy law on December 20, 2013.⁴²

Advocates of the new law argued the status quo was unacceptable, because Mexico was facing depleted reserves and declining output.⁴³ The law is intended to restore the efficiency of the oil and natural gas industry in Mexico, which is suffering from corruption, inefficiency and an inability to successfully implement new technologies. The reforms also propose improving the transparency and effectiveness of national finance.⁴⁴

The reforms would allow exploration and production contracts that include: licenses, production-sharing agreements, profit-sharing agreements, and service contracts. Prior to this legislation, only service contracts, in which foreign companies were paid for services rendered, were allowed. Under the new legislation, *Petroleos Mexicanos* (PEMEX), will remain a state-owned company, but will be given more budgetary and administrative autonomy and will have to bid competitively with other oil and gas companies on new projects.

On June 19, 2014, the conservative National Action Party (PAN) said that it would only support the energy reforms if President Pena Nieto agreed to electoral reforms that could have the effect of weakening his party's (Institutional Revolutionary Party, PRI), hold on power.⁴⁵ In addition, Mexico's left-wing parties had previously announced that they intended to promote a 2015 referendum to repeal the new energy laws that have already been passed.⁴⁶ However, on August 6, 2014, the Mexican Senate voted 78 to 26 in favor of a package of legislation that implements these changes to the Mexican oil industry and President Pena Nieto signed the laws on August 11, 2014.

⁴² Dolia Estevez, "Mexico Reverses History and Allows Private Capital Into Lucrative Oil Industry", 12/11/2013, <http://www.forbes.com/sites/doliaestevez/2013/12/11/mexico-reverses-history-and-allows-private-capital-into-lucrative-oil-industry/>

⁴³ David Agren, "Mexico opens up petroleum business to private and foreign companies," Special to *USA TODAY*, December 20, 2013 <http://www.usatoday.com/story/news/world/2013/12/20/mexico-petroleum-oil-foreign/4152521/>

⁴⁴ Ibid

⁴⁵ Tracy Wilkinson, "Mexican Political Parties at Impasse over Key Reforms," *Los Angeles Times*, June 19, 2014, <http://www.latimes.com/world/mexico-americas/la-fg-mexican-political-impasse-reform-20140619-story.html>

⁴⁶ David Agren, "Mexico opens up petroleum business to private and foreign companies," Special to *USA TODAY*, December 20, 2013 <http://www.usatoday.com/story/news/world/2013/12/20/mexico-petroleum-oil-foreign/4152521/>

On October 1, 2014 Mexico's state oil company Pemex and Exxon Mobil Corp signed a non-commercial agreement to jointly explore potential upstream and downstream business opportunities.⁴⁷ On the same day, a new private sector Mexican oil company, named Sierra Oil & Gas, was announced. Sierra Oil & Gas has secured equity investment commitments of \$525 million from U.S. private equity firms Riverstone Holdings LLC and EnCap Investments.⁴⁸

Developments in Mexico illustrate several of the features of the oil and natural gas industry described earlier: (1) the depletion of “easy oil reserves” (2) the need to employ more advanced technology in oil producing regions where the “easy oil” has been depleted; (3) the uncertainty created by a continuing struggle between populist nationalism and resource sovereignty on the one hand and economic efficiency and investor protection on the other.

China

In 2013, China produced 4.459 MBPD of petroleum liquids, making it the fourth largest producer in the world; and consumed 10.277 MBPD, making it the second largest petroleum liquids consumer in the world, after the United States. The government's energy policies are dominated by the country's growing demand for oil and its reliance on oil imports. The National Development and Reform Commission (NDRC), a department of China's State Council, is the primary policymaking, planning, and regulatory authority in the Chinese energy sector, but four other ministries oversee various aspects of the country's oil policy.

In July 2008, the government created the National Energy Administration (NEA) to act as the principal energy regulator. The NEA and the NDRC are responsible for approving new energy projects in China, setting domestic wholesale energy prices, and implementing the central government's energy policies. In January 2010, the government formed a National Energy Commission for the purpose of consolidating and conforming energy policies among the various

⁴⁷ Alexandra Alper and David Alire Garcia, “Mexico's Pemex signs cooperation agreement with Exxon Mobil”, Reuters, October 2, 2014, <http://www.reuters.com/article/2014/10/02/mexico-pemex-idUSL2NORX16I20141002?feedType=RSS>

⁴⁸ Laurence Iliff, Mexico's Energy Reform Gives Birth to a New Private Oil Company”, The Wall Street Journal, October 1, 2014, <http://online.wsj.com/articles/mexicos-energy-reform-gives-birth-to-new-private-oil-company-1412191958>

agencies under the State Council.⁴⁹ China's national oil companies (NOCs) also have significant influence in the formation of energy policy in China.

Between 1994 and 1998, the Chinese government reorganized most state-owned oil and natural gas assets into two vertically integrated firms that own both upstream and downstream assets, the China National Petroleum Corporation (CNPC) and the China Petroleum and Chemical Corporation (Sinopec). These two firms operate a range of local subsidiaries, and together control China's upstream and downstream oil markets. CNPC is the largest upstream oil company in China and together with its publicly-listed subsidiary, PetroChina, accounts for an estimated 53% and 75% of China's total crude oil and natural gas production, respectively. Sinopec's operations are focused on refining and distribution, which account for 76% of Sinopec's revenues. Other state-owned oil firms have emerged over the past several years. For example, the China National Offshore Oil Corporation (CNOOC) is responsible for offshore oil exploration and production.⁵⁰

Onshore oil production in China is mostly limited to China's NOCs, but international oil companies (IOCs) have been granted greater access to offshore oil prospects and technically challenging gas fields, mainly through production-sharing contracts (PSCs) and joint ventures (JVs) with international oil companies. Chinese investment laws require that China's NOCs must hold the majority interest in each production sharing agreement and retain the right to become the operator after development costs have been recovered by the partners in the production sharing agreement.⁵¹

The Communist Party of China (CPC) is the sole governing party in China, but it coexists with eight other legal parties that constitute the United Front. It is therefore more appropriate to discuss China's internal politics and policy in the context of competing bureaucracies rather than political parties. This competition includes disputes regarding internal pricing and subsidies, greater state sponsorship of one energy source over another, conflict over the priority to be given to environmental protection and national economic development and the extent to which state

⁴⁹ U.S. Energy Information Administration, *China*, EIA, February 4, 2014, p. 4-5.

⁵⁰ Ibid

⁵¹ Ibid

owned companies (CNPC, Sinopec and CNOOC) are allowed to negotiate their own deals with IOCs and host states.

Nigeria

In 2013, Nigeria produced 2.373 MBPD of petroleum liquids, making it the 13th largest producer in the world and exported 2.254 million barrels per day. The Nigerian National Petroleum Corporation (NNPC) was created in 1977 to provide oversight of the oil and natural gas industry and promote oil and natural gas development. In 1988, the NNPC was divided into 12 subsidiary companies to more effectively regulate the sub-sectors of the industry. The Department of Petroleum Resources (DPR), a department within the Ministry of Petroleum Resources, is also an important regulator of the Nigerian oil and gas industry.

Most of Nigeria's major oil and natural gas projects are funded through joint ventures (JVs) between international oil companies (IOCs) and NNPC, in which NNPC is the majority shareholder. Production Sharing Agreements (PSAs) are usually employed on deep water projects and generally include more attractive terms for the IOC than those projects onshore or in shallow water, to provide an incentive to the IOCs to invest in deep water projects.⁵²

The Petroleum Industry Bill (PIB), which was initially proposed in 2008, is expected to change the structure and fiscal terms governing the oil and natural gas sectors in Nigeria, if it becomes law. The bill is intended to ensure that the management and allocation of petroleum resources in Nigeria are conducted in accordance with the principles of good governance, transparency and sustainable development. The most recent version of the PIB was submitted to the Nigerian National Assembly on July 18, 2012, but has not yet been passed.⁵³ If the PIB is passed in its current form, it will impose changes to new and existing contracts that could make some projects commercially unviable, particularly deep water projects. Some of the most contentious provisions of the PIB are the potential renegotiation of existing contracts with IOCs, changes in tax and royalty structures, deregulation of the downstream sector, restructuring of NNPC, a

⁵² U.S. Energy Information Administration, *Nigeria*, EIA, December 30, 2013, p. 3-4.

⁵³ Dornim Solicitors and Legal Consultants, "Nigeria: An Overview of the Petroleum Industry Bill, 2012 Mondaq, January 28, 2014,

<http://www.mondaq.com/x/289212/Oil+Gas+Electricity/An+Overview+Of+The+Petroleum+Industry+Bill+2012>

concentration of oversight authority in the Ministry of Petroleum Resources, and a mandatory contribution by IOCs of 10% of monthly net profits to the Petroleum Host Communities Fund.⁵⁴

Because of the regulatory uncertainty created by the delay in passing the PIB, there has not been a licensing round for oil exploration in Nigeria since 2007. This regulatory uncertainty extends to the natural gas industry as well. The result is that less investment has been made in new projects than might otherwise have been made. Developments in Nigeria illustrate several of the features of the oil and natural gas industry described earlier: (1) the depletion of “easy oil reserves”, (2) the need to employ more advanced technology, and (3) the uncertainty created by a continuing debate over changes in national energy laws.

Iraq

Iraq’s oil production has increased from 2.399 MBPD in 2009 to 3.058 MBPD in 2013. Approximately 75% of Iraq's crude oil production comes from the oil fields in southern Iraq and the rest comes from the northern oil fields near Kirkuk. The majority of Iraqi oil production comes from just three very large oil fields: (1) Kirkuk, (2) the North Rumaila field in southern Iraq, and the South Rumaila field also in southern Iraq.

The Iraqi Ministry of Oil oversees oil and natural gas exploration and production in all areas of Iraq, except the Kurdish territory, through its operating entities the North Oil Company (NOC) and the Midland Oil Company (MDOC) in the north and central regions of Iraq; and the South Oil Company (SOC) and the Missan Oil Company (MOC) in the southern region of Iraq. Oil production in the northern region is controlled by the Kurdistan Regional Government (KRG). Production in this region varies because of disputes between the KRG and the central Iraqi government in Baghdad. Independent assessments by FACTS Global Energy and the Middle East Economic Survey suggest that crude oil production capacity under the control of the Kurdistan Regional Government (KRG) may have reached 400,000 BPD (barrels per day) at the end of 2013.⁵⁵

In addition, political disputes between the Sunni, Shia and Kurdish sects within Iraq and the absence of a law governing the development of Iraq's oil and natural gas, have slowed the pace at

⁵⁴ U.S. Energy Information Administration, *Nigeria*, EIA, December 30, 2013, p. 3-4.

⁵⁵ U.S. Energy Information Administration, *Iraq*, EIA, April 2, 2013, p. 1

which Iraq's oil production has increased. The proposed Hydrocarbon Law, which would govern Iraq's contracts with and regulation of oil and gas companies, has been under review in the Council of Ministers since October 26, 2008, but has not received final passage.⁵⁶ The violence created by I.S.I.S. (The Islamic State in Iraq and Syria) or I.S.I.L. (The Islamic State in Iraq and the Levant) in Iraq's Northern and Western provinces have brought some Iraqi oil fields under the control of I.S.I.S making the passage of this bill even less likely.

Furthermore, the ruling party's (Dawa Party) insistence on centralizing policy making in the Shia dominated government in Baghdad under the leadership of former Prime Minister, Nouri al-Maliki exacerbated these conflicts. The election of Haider al-Abadi, who is thought to be a more inclusive leader, may help bring Sunnis, Shias and Kurds closer together, making cooperation on oil production and oil policy easier, but I.S.I.L.'s control of oil fields and refineries in Northern and Western Iraq could reduce oil production in the long term. The next section examines the motivation, behavior and policy of national oil companies.

3.3.2 National Oil Companies

National oil companies control a substantial part of world oil production and world oil reserves. Consequently, they play a critical role in the balance between supply and demand. Understanding the policies and behavior of national oil companies is therefore important for understanding the operation of the international oil and gas industry.

Victor identified four main approaches to understanding NOCs in the literature: (1) Theoretical and historical efforts to explain why NOCs exist (2) Assessments of economic efficiency that have demonstrated considerable variation in the financial performance of NOCs (3) NOC's political behavior, a topic of particular interest to political scientists, who have tried to explain the abnormal politics in resource-rich countries and (4) Reform, a continuing topic in resource-rich countries, especially those in which NOCs have performed poorly or engaged in perverse political behavior (or both).⁵⁷ This section focuses on 1 and 3.

⁵⁶ Ibid, p. 1

⁵⁷ David G. Victor, "National Oil Companies and the Future of the Oil Industry," *The Annual Review of Resource Economics*, Volume 5, (June 2013): p. 445 - 462

Why NOCs Exist

A World Bank study prepared by Tordo et al. examined why NOC's exist.⁵⁸ From that study Victor identified four principal reasons why governments have created and maintained NOCs rather than rely on private sector companies and simply impose taxes on them.⁵⁹

(1) *Weakness of Public Institutions.* Governments must perform many functions, including the regulation of a complex oil and natural gas industry. The institutions needed to regulate the industry are often weak or non-existent in developing countries. Governments may create an NOC to facilitate the collection of information and the regulation of the industry by giving themselves direct access to the country's oil and gas operations.⁶⁰ ⁶¹ A central NOC can track and allocate rents and provide fiscal oversight of the industry. For example, in Angola one of the main functions of its NOC, Sonangol, is to regulate the sector and oversee the behavior of the large number of IOCs active in the country.⁶²

(2) *Inadequacy of the Domestic Private Sector.* Maximizing the value of oil and gas resources requires coordination among many firms and often few if any of these firms exist in a country with previously unknown hydrocarbon resources. Governments often create an NOC to help encourage the orderly development of the oil and gas industry.⁶³ In addition, many NOCs are given the responsibility for developing domestic industry suppliers (e.g. drill pipe, drilling fluids, seismic exploration and waste water treatment) and customers (utilities, industrial and automotive). In Saudi Arabia, for example, the Saudi national oil company led the development of the nation's petrochemical industry.⁶⁴ ⁶⁵

⁵⁸ Silvana Tordo, Brandon S. Tracy and Noora Arfaa, *National Oil Companies and Value Creation*, Working Paper 218, Chapter 2, The World Bank (Washington, DC, 2011)

⁵⁹ David G. Victor, "National Oil Companies and the Future of the Oil Industry," *The Annual Review of Resource Economics*, Volume 5, (June 2013): p. 445 - 462

⁶⁰ L. E. Grayson, *National Oil Companies*. (Chichester, UK: Wiley, 1981)

⁶¹ C. McPherson, *National Oil Companies: Ensuring Benefits and Dealing with Systemic Risks*. In *The Handbook of Global Energy Policy*, ed. A. Goldthau, (Hoboken, NJ: Wiley-Blackwell, 2013) pp. 146–56

⁶² David G. Victor, "National Oil Companies and the Future of the Oil Industry," *The Annual Review of Resource Economics*, Volume 5, (June 2013): pp. 445-462.

⁶³ C. van der Linde, *The State and the International Oil Market: Competition and the Changing Ownership of Crude Oil Assets*. (Boston: Kluwer Academic Publishers. 2000)

⁶⁴ A. C. Brown, *Oil, God, and Gold: The Story of Aramco and the Saudi Kings*. (Boston/New York: Houghton Mifflin, 1999)

⁶⁵ P. Stevens, 2012, *Saudi Aramco: The Jewel in the Crown*. See Victor et al. 2012b, *Oil and Governance: State-Owned Enterprises and the World Energy Supply*. Cambridge, UK/New York: Cambridge Univ. Press, pp. 173–233

(3) *Desire for Internal Control over the Revenue Created by Oil and Gas Production.* Control over the cash inflow from production and sale of oil is of major importance to a host government, whether it intends to use the revenue for public purposes or is intent on diverting it for private gain.^{66 67} (This is a separate issue from the more general concern about industry regulation.) In countries that are primarily dependent on oil and gas exports for government revenue and in which *rentier* politics predominate, the key to controlling the rents is to control the NOC. This explanation is usually reformulated in public statements as a matter of national pride and the people's desire for the state to exercise sovereignty over the country's oil resources.⁶⁸

(4) *The Desire to Project Economic and Political Power Abroad.* An NOC can be used to exert political influence abroad as well as at home, for example Russia has used the threat of termination of gas delivery to Western Europe and countries that were previously a part of the Soviet Union to retain influence in these countries.⁶⁹ These four explanations are related to each other and more than one is usually operating in a country at any given time.

Political Behavior of NOCs

The creation of an NOC is itself a political act; and given their size and importance to the national economy, they inevitably become involved in national politics. The studies of political behavior of NOCs can be divided into two categories. One category emphasizes the principal-agent relationship between the host government and the NOC, in which the principal (the state and its people) try to encourage an agent (the NOC) to align its behavior with the principal's interests.⁷⁰

⁶⁶ David G. Victor, D. R. Hulst, and M. C. Thurber, eds., *Oil and Governance: State-Owned Enterprises and the World Energy Supply*. (Cambridge, UK/New York: Cambridge Univ. Press, 2012b) p. 3 - 31

⁶⁷ C. Warshaw, *The Political Economy of Expropriation and Privatization in the Oil Sector*. See Victor et al. *Oil and Governance: State-Owned Enterprises and the World Energy Supply*. (Cambridge, UK/New York: Cambridge Univ. Press, 2012b), pp. 35–61

⁶⁸ David G. Victor, "National Oil Companies and the Future of the Oil Industry," *The Annual Review of Resource Economics*, Volume 5, (June 2013), pp. 445-462.

⁶⁹ Ibid

⁷⁰ G. J. Miller, "The Political Evolution of Principal-Agent Models," *Annual Review of Political Science*, 8(1): (2005), pp. 203–25

A second group of studies demonstrate how NOCs become political actors to advance their own agenda and increase their power. For example, Mommer⁷¹ demonstrated how NOCs that began as rent collectors for the state (e.g. PDVSA) acquired a larger range of functions over time, including oil production and refining operations abroad.⁷² A large number of case studies have shown how NOCs have become states within a state; insulating themselves from external review and so increasing their freedom to pursue their own self-interest. Russia's *Gazprom* is one of the more obvious examples.⁷³ Some of the literature on Saudi Aramco points to similar conclusions.⁷⁴ The next section examines the politics, policies and objectives of international oil companies.

3.3.3 International Oil Companies

Between 1970 and 1980, a substantial portion of the world's oil reserves were nationalized by the governments of the oil producing countries. For example, in 1976 the nationalization of the Kuwait Oil Company was completed and was 100% owned by the government of Kuwait.⁷⁵ In 1979, during the Islamic Revolution the National Iranian Oil Company (NIOC) was nationalized and was 100% owned by the government of Iran.⁷⁶ In 1974, Saudi-Aramco was 60 % owned by the Saudi government, but by 1980 it was 100% owned by the Saudi government.⁷⁷ The immediate effect of these nationalizations was to substantially reduce the oil and gas reserves under the control of the IOCs. The secondary effect was the consolidation of oil and gas companies in the private sector. For example, Exxon and Mobil merged in 1999 and Conoco and Phillips Petroleum merged in 2002.

The expropriation of the IOCs' oil and gas reserves called into question the future of the IOC's. In addition, the IOCs' rationale for merging and their long term future depended on their ability to successfully develop very large oil and natural gas projects in difficult environments, often

⁷¹ B. Mommer, *Global Oil and the Nation State*. Oxford, (UK/New York: Oxford Univ. Press 2002)

⁷² David G. Victor, "National Oil Companies and the Future of the Oil Industry," *The Annual Review of Resource Economics*, Volume 5, (June 2013), pp. 445-462.

⁷³ N. Victor and I. Sayfer, *Gazprom: the struggle for power*, 2012, See Victor et al. *Oil and Governance: State-Owned Enterprises and the World Energy Supply*. (Cambridge, UK/New York: Cambridge Univ. Press, 2012b), pp. 655-700

⁷⁴ R. Vitalis, *America's Kingdom: Mythmaking on the Saudi Oil Frontier*. (Stanford: Stanford Univ. Press, 2006)

⁷⁵ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy & Finance* (Tulsa, OK: PennWell Corporation, 2010) p. 57

⁷⁶ Ibid, p. 57

⁷⁷ Ibid, p. 57

involving complex geology and significant technical risk.⁷⁸ Consequently, much of the research on international oil companies between 1985 and 2005 focused on their future role in the industry.

However, the IOCs have succeeded in making this transition and are still among the largest oil and natural gas companies in the world.⁷⁹ In 2012, ExxonMobil, Royal Dutch Shell, Chevron Corp, BP Plc and ConocoPhillips, had combined net income of \$121.2 billion (30.1% of all oil and gas companies reporting profits in that year. (These figures do not include the countries of the Middle East and Africa which do not report net income). These five companies produced 7.47 MBPD of oil or 8.4% of the 89.8 million barrels per day produced worldwide in 2012. They also produced 31.7 billion cubic feet per day of natural gas or 7.8% of 404.0 billion cubic feet produced per day worldwide in 2012. (These numbers include the countries of the Middle East and Africa).⁸⁰ In 2012, the next 20 largest U.S. oil companies reported \$20.2 billion in net income on 2.9 MBPD of oil production.⁸¹ The IOCs therefore still control substantial capital inflows that can be invested in future exploration and production projects.

In 2008, these five firms accounted for \$125.1 billion (23.4%) of total capital expenditures and exploration expense (CAPEX) of the \$534.7 billion spent on oil and gas exploration worldwide. (These figures do not include the NOCs of the Middle East and Africa which do not report capital expenditures and exploration expense). In 2012, these five firms accounted for 23.6% of the \$579.5 billion spent on CAPEX for oil and natural gas exploration worldwide.^{82 83 84 85} (This \$579.5 billion does not include the capital expenditures and exploration expense made by the

⁷⁸ The Wall Street Journal "Big Oil's Latest Roadblock: Governments Reduce Access to Aid National Champions amid Scramble for Supply," September 24, 2007, p. C10; Dermot Gately, "What Oil Export Levels Should We Expect from OPEC?" *Energy Journal* 28 (2007): 151-173; Petter Osmundsen, Klaus Mohn, Bard Misund, and Frank Asche, "Is Oil Supply Choked by Financial Market Pressures?" *Energy Policy* 35 (2007): 467-474; Dermot Gately, "OPEC's Incentives for Faster Output Growth," *Energy Journal* 25 (2004): 75-96; Dermot Gately, "How Plausible is the Consensus Projection of Oil below \$25 and Persian Gulf Oil Capacity and Output Doubling by 2020?" *Energy Journal* 22 (2001): 1-27

⁷⁹ Peter Hartley, Kenneth B. Medlock, III, and Stacy L. Eller, "Empirical Evidence on the Operational Efficiency of National Oil Companies," in *The Changing Role of National Oil Companies in International Energy Markets*, March 2007, <http://link.springer.com/article/10.1007/s00181-010-0349-8#page-1>

⁸⁰ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-200/2013.pdf>

⁸¹ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-200/2013.pdf>

⁸² Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-200/2009.pdf>

⁸³ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-100/2009.pdf>

⁸⁴ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-200/2013.pdf>

⁸⁵ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-100/2013.pdf>

NOCs in the countries of the Middle East and Africa and is therefore lower than the \$617.2 billion estimated by Barclays Bank for 2012. Barclays estimated the CAPEX made by the NOCs of the Middle East and Africa at \$26.3 billion and \$23.8 billion, respectively in 2012. Adding these two figures to \$579.5 billion gives \$629.6 billion ($\$579.5 + \$26.3 + \$23.8 = \629.6), which is close to the \$617.2 billion Barclays estimated for global CAPEX, in 2012.)⁸⁶

However, these five firms accounted for only 29.8 billion barrels and 33.0 billion barrels of proved liquid reserves (oil and LPG) in 2008 and 2012, respectively, or 2.0% of liquid reserves worldwide (conventional and unconventional) of 1,687.3 billion barrels.^{87 88 89}

Changing Role of the IOCs

Between 1995 and 2005, the role of the IOCs evolved from technically integrated and self-sufficient exploration and development companies, to general contractors, coordinating the operations of a large number of suppliers and subcontractors who perform specific tasks (producing and analyzing seismic data, provide drilling rigs and crews, and providing a wide range of oil field services). The IOCs provide the project management and organizational skills these large projects require. The largest IOCs also function as bankers by providing or arranging the financing needed to explore and develop large fields in difficult environments.⁹⁰ For this reason, IOCs have substantial bargaining leverage at the beginning of negotiations with a host country.⁹¹

The Politics of International Oil Companies

IOCs are not primarily political actors but rather economic actors. They tend to be involved in political issues only to the extent that the actions of government affect the economics of their operations and their future profitability. However, the price and the availability of oil and natural gas industry are of intense interest to constituents and governments in developed and developing countries. Oil and natural gas is therefore the object of considerable government legislation.

⁸⁶ Barclays, Global 2013 Capital Spending Outlook, Courtesy of Barclays Research Department

⁸⁷ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-200/2013.pdf>

⁸⁸ Oil & Gas Journal, <http://www.ogj.com/content/ogj/en/downloadables/survey-downloads/ogj-100/2013.pdf>

⁸⁹ BP, BP Statistical Review of World Energy June 2013, <http://www.bp.com/statisticalreview>

⁹⁰ Amy Myers-Jaffe and Ronald Soligo, "The International Oil Companies," The James A. Baker III Institute for Public Policy, November 2007, p. 36-37. <http://bakerinstitute.org/files/707/>

⁹¹ Ibid, p. 39

Bradley characterizes the political behavior of private sector oil companies as either defensive or offensive. Defensive behavior refers to oil companies trying to influence legislation initiated by others that it believes will increase its costs or reduce its revenues. Offensive behavior refers to oil companies initiating legislation that they believe will reduce their costs and increase their revenues. This latter example is the kind of political behavior that North had in mind when he said “Incremental change [in institutions] comes from the perceptions of the entrepreneurs in political and economic organizations, that they could do better by altering the existing institutional framework at some margin”.⁹²

Gourevitch proposed a more nuanced explanations for policy formation and institutional development. These explanations are the production profile, intermediate associations, state structure, economic ideology and the international system. All five explanations have been dominant at some point in the political history of the oil and gas industry.⁹³

Whether the oil and gas industry’s political behavior is driven by offensive or defensive considerations, or by one of the explanations given by Gourevitch, the fact remains that the oil and gas industry has a considerable presence in capitols around the world. For example, in 2013, the oil and gas industry, including refining, transportation and distribution, spent \$145 million on behalf of 190 clients and employed 765 lobbyists in Washington, DC.⁹⁴

⁹² Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, UK: Cambridge University Press, 1990), p. 8

⁹³ Peter Gourevitch, *Politics in Hard Times* (Cornell University, Ithaca, New York, 1985) p. 54 - 65

⁹⁴ Open Secrets .org, Center for Responsive Politics, Influence and Lobbying

Chapter 4 Research Design

4.1 Overall Design

The research design for this study has several components. The first is an analysis of the record of expropriations in the oil and gas industry (Question #1). The second is an examination of those disputes that were brought before an international court or tribunal (Question #2). The third and fourth review the provisions most often included in contracts (Question #3); and bilateral treaties (Question#4) to minimize risk and uncertainty. The fifth and sixth analyze the relationship between bilateral treaties, the frequency of disputes, and the reliability of legal systems (Question #5); and the relationship between the amount of oil a country consumes, foreign direct investment outflows and inflows and the number of bilateral treaties a country has signed (Questions #6). The seventh examines the sources of capital; and the risk characteristics of various financing structures, business structures, and alliances (Question #7). The eighth reviews the financial instruments available for managing risk after a project has commenced operation. The ninth examines the origins and relevance of financial and operational transparency (Question #9). The tenth evaluates the scope and relevance of multilateral investment treaties, international energy forums and energy diplomacy (Question #10). The research design also includes interviews with government and non-government officials and six case studies which test the conclusions drawn in Chapter 6.

4.2 Unit of Analysis

The unit of analysis used in Question #1 is the individual instances of a country expropriating oil and gas assets. The unit of analysis used in Question #2 is the individual disputes brought before an international court or tribunal. The unit of analysis used in Questions #3 and #4 are the specific provisions included in contracts and bilateral treaties. The unit of analysis used in Questions #5 and #6 are individual countries. The unit of analysis used in Question #7 is the types of transactions and transaction structures. The unit of analysis used in Question #8 is the specific financial instruments available for managing risk. The unit of analysis used in Question #9 is the specific governmental and non-governmental institutions responsible for financial and operational transparency. The unit of analysis used in Question #10 is specific multilateral treaties, international energy forums and individual acts of energy diplomacy. The unit of

analysis in the case studies is the individual events that comprise six major developments in the oil and natural gas industry.

4.3 Time Period Covered by Events

Question #1 includes expropriations between 1990 and 2014. Question #2 includes the cases brought before the ICSID or some other tribunal between 1996 and 2014. Question #3 includes provisions that have been used for several decades; and Question #4 draws on examples from 1948 to 1999. Question #5 uses the number of bilateral treaties signed by each country as of July 2014; the frequency of disputes between 1996 and 2014; and the ranking of country legal systems by the World Bank in 2012. Question #6 uses the number of bilateral treaties in each country as of July 2014, the amount of oil it consumed in 2012, and foreign direct investment (FDI) inflows and outflows in 2012. Question #7 references examples related to sources of financing from 1944 through 2012; financing structures between 1960 and 2010; business structures between 1966 and 2014; and alliances between 2010 and 2014. Question #8 uses examples from 1969 to the present. Question #9 references events and sources between 2004 and 2012. Question #9 references events related to multilateral treaties between 2002 and 2013; international energy forums between 1991 and 2013; financial reporting between 2000 and 2013; signature bonuses between 2002 and 2011; and energy diplomacy between 2010 and 2011. The events included in case #1 cover the period from 2011 to 2014; case #2 from 2009 to 2014; case #3 from 1992 to 2005; case #4 from 2010 to 2014; case #5 from 1998 to 2014; and case #6 from 2003 to 2013.

4.4 Kinds of Evidence Already Available

The review of expropriations in the oil and natural gas industry includes 12 expropriations between 2003 and 2012 (Question #1). The review of disputes includes 68 cases brought before the ICSID or other international tribunals (Question #2). The review of contracts includes nine specific examples of common contract provisions and five general examples (Question #3). The review of bilateral treaties includes five specific examples of common bilateral treaty provisions and three general examples (Question #4). The review of bilateral treaties, the frequency of disputes and the reliability of legal systems includes the 24 largest oil importing and exporting countries (Question #5). The analysis of bilateral treaties vs. oil consumption includes 66 countries; bilateral treaties vs. foreign direct investment outflows (191 countries); bilateral

treaties vs. foreign direct investment inflows (213 countries); and the impartiality of decisions (16 cases) (Question #6). The review of sources of capital, financing structures, business structures and alliances includes six sources of capital, seven financing structures, three business structures, and two types of alliances (Question #7). The review of the financial instruments for managing risk is divided into two broad categories, commercial risk and non-commercial risk (Question #8). The review of methods for measuring financial reporting quality describes two approaches. The evaluation of the theoretical and practical importance of financial reporting quality is based primarily on the existing literature. The relationship between the quality of financial reporting and foreign direct investment was evaluated using a sample of 38 countries. The reserve estimates made by producing countries and reported by various publications are compared to estimates made by independent analysts. The practical implications of reserve estimates were based on prior experience and general economic theory (Question #9). The evaluation of the scope and relevance of multilateral investment treaties and international energy forums was based on the number of these institutions and their ability to influence policy and practice in the oil and natural gas industry. The effectiveness of energy diplomacy was evaluated using media reports and the analysis of industry specialists (Question #10).

The interviews were conducted by telephone with government and non-government officials in Washington, DC. Efforts to obtain interviews with executives working in private-sector oil companies, oil service companies and national oil companies were unsuccessful. The six case studies in Chapter 7 were developed from more than 100 media reports of the individual actions comprising six major projects in the oil and gas industry.

Chapter 5 – Research Methods

The general method used in this study is to compare theory to practice. This requires a simultaneous explanation of why particular institutions exist and how they operate. To do this, this study employs several research methods, including qualitative analysis (literature search, historical events, interviews and case studies) and quantitative methods (industry statistics and statistical methods).

5.1 The Process and Adequacy of the Evidence

5.1.1 History of Expropriations in the Oil and Gas Industry (Question #1)

The history of expropriations was developed by searching for online accounts of these events. Examining the history of expropriations between 1990 and 2014 provided sufficient historical perspective on expropriation to evaluate how frequently they occur and under what conditions they are more or less likely to occur.

5.1.2 Disputes and Dispute Resolution (Question #2)

The list of disputes brought before a court or tribunal between 1996 and 2014 were obtained from the United Nations Conference on Trade and Development (UNCTAD) website. This database includes 597 cases brought before an international court or tribunal over 20 years.

5.1.3 Common Contract Provisions (Question #3)

The provisions most often included in oil and gas contracts were compiled from law books, journal articles and specific contracts. These sources provided summaries and examples of these provisions, the purpose they serve and the specific language used; and are representative of the provisions included in most contracts.

5.1.4 Bilateral Treaty Provisions (Question #4)

The provisions found in most bilateral treaties were developed by reference to law books and the text of specific bilateral agreements. These examples were taken from 1948 to 1999. They illustrate the evolution of these agreements and are representative of the types of clauses in most bilateral treaties.

5.1.5 Frequency of Disputes and Legal Systems (Question #5)

The number of bilateral treaties signed by each country as of July 2014 and the number of disputes to which each country was a party, between 1996 and 2014, were obtained from the United Nations Conference on Trade and Development (UNCTAD) website. The ranking of the legal systems of each country in 2012 was obtained from the World Bank website. This data is sufficient to test whether a relationship exists between the number of disputes and two specific types of institutions (bilateral treaties and national legal systems).

5.1.6 Oil Consumption and Foreign Direct Investment (Question #6)

The number of bilateral treaties signed by each country as of July 2014 and the foreign direct investment (FDI) outflows and inflows in 2012, were obtained from the United Nations Conference on Trade and Development (UNCTAD) website. The oil consumed in 2012, in each country, was obtained from the U.S. Energy Information Administration (EIA) website. These data only compare these variables at one point in time, 2014 in the case of bilateral treaties and 2012 in the case of oil consumption and FDI inflows and outflows however, they are adequate to make a preliminary judgment whether these variables are related to one another.

5.1.7 Capital Sources, Financing and Business Structures and Alliance (Question #7)

A general description of the sources of financing, financing structures, business structures, and alliances were developed from recent books and journal articles. Specific examples of each were developed by conducting an online search of recent transactions. These general descriptions and specific examples are representative of the available sources of financing and choice of commercial structures.

5.1.8 Financial Instruments for Managing Risk (Question #8)

A general description of the financial instruments available for managing risk was developed from books and journal articles. The size and scope of the market for political risk insurance was obtained from the Multilateral Investment Guarantee Agency and the Berne Union websites.

5.1.9 Transparency, Financial Reporting and Reserve Estimation (Question #9)

The methods devised for measuring the quality of financial reporting were obtained from the accounting literature. The evaluation of the theoretical importance of the quality of financial

reporting was derived from the theoretical literature by North, Coase, Williamson and others. The evaluation of the practical importance of the quality of financial reporting was derived from recent journal articles and general economic theory. The analysis of the relationship between the quality of financial reporting and direct foreign investment was developed using the existing literature and the statistics compiled by UNCTAD. This study compares the quality of financial reporting and foreign direct investment in only one year, but includes 38 countries.

A description of the methods used in the United States for estimating reserves was obtained from the Society of Petroleum Engineers (SPE) and the Securities and Exchange Commission (SEC) websites and several journal articles. An evaluation of actual estimates of oil and gas reserves, were developed by comparing several sources including the Oil & Gas Journal (O&GJ), the U.S. Energy Information Administration (EIA) and the BP Statistical Review of World Energy.

The method prescribed by the SPE and the SEC for estimating the quantity and value of reserves is applied by all U.S. oil and gas companies and is widely accepted in other countries as well. These institutions are therefore adequate to demonstrate the process by which these rules are developed and the manner in which they are applied. The actual estimates made by the O&GJ, EIA and BP are all derived from numbers published by individual countries. These estimates are in some cases higher than would be justified if the SPE procedures and SEC rules were applied.

5.1.10 Multilateral Treaties, International Forums and Energy Diplomacy (Question #9)

The scope and relevance of multilateral investment treaties and international energy forums was evaluated based on their number and their ability to affect energy policy and industry practice in the international oil and gas industry. The effectiveness of these institutions and the effectiveness of energy diplomacy were evaluated using media reports and the analysis of industry specialists.

5.1.11 Interviews

Thirty one (31) letters were mailed to specific oil and gas executives on August 18, 2014. These letters included eight to private sector oil companies, nine to national oil companies, five to oil service companies, seven to U.S. government departments and agencies and two to international agencies. Five responses agreeing to an interview were received. The remaining 26 potential

interviewees either declined the interview or did not respond at all. The five interviews were conducted between September 22 and September 30, 2014.

Two interviews were conducted with officials at the U.S. Department of Energy (DOE), one with an official at the Overseas Private Investment Corporation (OPIC), one with an official at the Multilateral Investment Guarantee Agency (MIGA) and one with an official at the International Centre for the Settlement of Investment Disputes (ICSID). The interview questions were designed to better understand how decisions are made in private and public sector organizations and institutions, an aspect of decision making that is often not available in published media reports or press releases.

5.1.12 Case Studies

The case studies were compiled from an extensive search of online sources (media reports, journal articles, and NGO reports). The events included in case #1 cover the period from 2011 to 2014; case #2 from 2009 to 2014; case #3 from 1992 to 2005; case #4 from 2010 to 2014; case #5 from 1998 to 2014; and case #6 from 2003 to 2013. Every account of an event was verified by reference to another source reporting on the same event.

5.2 Analytical Techniques for Evaluating the Evidence

5.2.1 History of Expropriations in the Oil and Gas Industry (Question #1)

The analysis of the evidence related to expropriations is based on a comparison of the number of expropriations per year and their relationship to the change in the price of oil.

5.2.2 Disputes and Dispute Resolution (Question #2)

The analysis of the evidence related to disputes and dispute resolution begins with a comparison of the number of disputes in the oil and gas sector and the number of disputes in other industry sectors. Next, it compares (1) the frequency of disputes and the changes in the price of oil; (2) the number of disputes and the number of major transactions in the industry each year; (3) the number of disputes and institutional effectiveness; and (4) the number of disputes and the choice of rules and venues.

5.2.3 Common Contract Provisions (Question #3)

This section begins with a description of the general contract provisions included in all contracts and then describes more specialized clauses related to economic stabilization, the use of domestic and foreign courts, and arbitration rules. This section also provides specific examples from recent contracts.

5.2.4 Bilateral Treaty Provisions (Question #4)

This section begins with a description of choice of law clauses; then describes clauses intended to promote, admit and protect the investment of foreign investors; and clauses prescribing various standards of treatment (national, most favored nation, international, and minimum). This section concludes with a description of the procedures to be followed by the expropriating government; an analysis of the legal instruments most often referenced in these proceedings and the time needed to resolve disputes in an international court or tribunal.

5.2.5 Frequency of Disputes and Legal Systems (Question #5)

This section uses scatter plots, measures of R^2 and qualitative interpretations to (1) compare the number of bilateral treaties and the number of disputes; and (2) the quality of the national legal system and the number of disputes.

5.2.6 Oil Consumption, Production, and Foreign Direct Investment (Question #6)

This section uses scatter plots and qualitative interpretation to compare (1) the amount of oil a country consumes versus the number of bilateral treaties it has signed, and (2) the FDI outflows from a country versus the number of bilateral investment treaties it has signed, (3) the FDI inflows to a country versus the number of bilateral investment treaties it has signed, and (4) analyzes the effectiveness and the efficiency of international courts and tribunals using simple frequency and count models.

5.2.7 Capital Sources, Financing and Business Structures and Alliances (Question #7)

This section describes the sources of financing and uses a combination of qualitative and quantitative information to evaluate the relative importance of various sources of capital. Second, it explains the financing structures used in the oil and gas industry. Third, it illustrates

the business structures used in the oil and gas industry, using generic examples. Fourth, it examines the feasibility of alliances between NOCs and IOCs and between two NOCs.

5.2.8 Financial Instruments for Managing Risk (Question #8)

This section is primarily descriptive, but includes some quantitative analysis of the size of the market for political risk insurance.

5.2.9 Transparency, Financial Reporting and Reserve Reporting (Question #9)

This section begins with a definition of transparency and reporting quality. It then examines several methods for measuring reporting quality. Third, it briefly reviews the theoretical importance of transparency by restating the observations and analysis of the institutional economists. Fourth, it examines the practical importance of the quality of financial reporting by summarizing some of the literature published on this subject. Fifth, it uses scatter diagrams and a qualitative assessment of the results to evaluate whether the quality of financial reporting influences direct foreign investment. Sixth, it compares the methods used to estimate oil and natural gas reserves and identifies some of the technical and political problems in evaluating these estimates. Finally, it evaluates the practical importance of these estimates.

5.2.10 Multilateral Treaties, International Forums and Energy Diplomacy (Question #10)

This section describes the current state of multilateral treaties, particularly as they relate to direct foreign investment. Next it provides a brief history of the development of international energy forums. Third, it summarizes the convergence observed in the practice of financial reporting. Fourth, it explains the practice of signature bonuses and cites two specific examples. Fifth, it defines energy diplomacy; explains its intended purpose, and presents several arguments for and against energy diplomacy.

5.2.11 Interviews

The length of the interviews was between 30 minutes and one hour. Only one interview was conducted with each respondent. The questions were designed specifically for each respondent, consequently there was relatively little overlap between questions and answers and therefore only occasional opportunity for consensus. The interviews provided useful background information and insight into the operation of the political risk insurance market and the

international lending process in developing countries. However, the international oil companies, national oil companies and oilfield service companies that were contacted all declined to be interviewed, precluding the insight that might have been possible if even a few of these private sector companies had agreed to be interviewed. The explanations and observation made by the respondents are compared to the conclusions drawn from the quantitative and qualitative analysis in Chapter 6.

5.2.12 Case Studies

The events in each case study are presented in chronological order. At the end of each case those events are compared to the theory presented in Chapter 3 and the findings in Chapter 6.

5.3 Objectivity, Reliability, Completeness and Validity

5.3.1 History of Expropriations in the Oil and Gas Industry (Question #1)

The history of expropriation in the oil and gas industry was developed through a search of online media accounts of these events. Two or more sources were used to ensure objectivity and reliability. The search was continued until the events that had already been identified dominated the search results. The validity of the accounts of these events was ensured by using respected sources of journalism.

5.3.2 Disputes and Dispute Resolution (Question #2)

The objectivity and reliability of this data was ensured by relying on the UNCTAD database as a primary source for disputes brought before various international courts and tribunals and comparing this database with reports in the news media. No reports of cases were found in the media that were not also reported in the UNCTAD database. The validity of the data is supported by the extensive documentation and annotation of these cases in the database and the reputation of UNCTAD itself. However, the UNCTAD database includes the following disclaimer “The data included in this database are based on extensive research and interviews, but represent only those claims which were disclosed by the parties or arbitral institutions”.⁹⁵

⁹⁵ UNCTAD, http://iiadbcases.unctad.org/cases.aspx?col_year=show (This site is no longer active, site is being redesigned, a reduced database is available at <http://unctad.org/en/Pages/DIAE/ISDS.aspx>)

5.3.3 Common Contract Provisions (Question #3)

The objectivity and reliability of these contract provisions were insured by consulting several scholarly sources. The provisions derived from these sources are complete in the sense that they are representative of the most common provisions in oil and gas contracts. The validity of these provisions is supported by the inclusion of the text from several recent oil and gas contracts.

5.3.4 Bilateral Investment Treaty Provisions (Question #4)

The objectivity and reliability of these bilateral provisions were insured by consulting several scholarly sources. This list of bilateral treaty provisions is not meant to be comprehensive but is representative of the most important and most common provision in bilateral investment treaties. The validity of these provisions is supported by the inclusion of the text from several recent bilateral investment agreements.

5.3.5 Frequency of Disputes and Legal Systems (Question #5)

The number of bilateral treaties signed by each country was obtained from the UNCTAD database and should therefore be reliable. However, UNCTAD relies on self-reporting by member countries regarding the treaties they have signed and those that are in force. The accuracy and completeness of the data therefore depends on the timeliness and accuracy with which member states provide updates to UNCTAD.

5.3.6 Oil Consumption and Foreign Direct Investment Outflows and Inflows (Question #6)

The oil consumed in 2012 in each country was obtained from the United States Energy Administration (EIA) website. The EIA relies on the International Energy Agency (IEA), the Oil & Gas Journal (O&GJ) and U.S. Federal Energy Regulatory Commission (FERC) for this data. The foreign direct investment (FDI) outflows from each country and inflows to each country in 2012, was obtained from the United Nations Conference on Trade and Development (UNCTAD), which depends on the World Bank and the International Monetary Fund for this information. The accuracy of this information is dependent on self-reporting by the member countries.

5.3.7 Capital Sources, Financing and Business Structures and Alliances (Question #7)

Descriptions of capital sources, financing structures, business structures and alliances were developed from a review of articles published in trade journals, conference papers and industry

reports. There is broad agreement in the literature on the meaning of these terms, the choices within each category, and the advantages and disadvantages of each. The completeness of the search was ensured by continuing the search until options that had already been identified dominated the search results. The validity of the options was supported by identifying actual examples of their use.

5.3.8 Financial Instruments for Managing Risk (Question #8)

Descriptions of the financial instruments available for managing risk were developed from a review of books and articles published in academic and trade journals. The completeness of the search was ensured by continuing the search until options that had already been identified dominated the search results. The validity of the options was supported by identifying actual examples of their use.

5.3.9 Transparency, Financial Reporting and Reserve Reporting (Question #9)

The objectivity and the reliability of the methods used to measure reporting quality and its influence on investment decisions was based on an evaluation of the methods used by each author and the statistical and substantive significance of their results. This literature review is not complete, but is representative of the literature in this field. The estimates of world oil and gas reserves have been criticized by some analysts as too optimistic. The limitations on the objectivity and reliability of these estimates are discussed in Chapter 6. Finally, the practical importance of these estimates was evaluated using a combination of theory and practice.

5.3.10 Multilateral Treaties, International Forums, NGOs and Energy Diplomacy (Question #10)

The purpose of specific multilateral treaties, international energy forums and NGO's is a matter of record, but evaluations of how effective these institutions have been has varied. The effectiveness of these institutions is evaluated taking into account the political reality that each faces. Energy diplomacy includes a wide range of strategies. This study includes a representative list of the methods that have been employed in the practice of energy diplomacy.

5.3.11 Interviews

The interviews did not present as significant a challenge to objectivity and reliability as expected. This is in part because many of the questions the interviewees were asked were

procedural and could be answered by statements of fact rather than opinion or conjecture. Second, the number of questions aimed at assessing motivation, were much smaller and the answers were conditioned to some extent by the premise or fact situations described by the interviewer. The inability to obtain interviews from private-sector oil companies, national oil companies and oil field services companies limits the perspective on certain issues. Those interviews that ran for an hour can be said to be complete, but the interviews that ran for 30 minutes were not complete, but addressed the most important issues. The correctness of the interviewer's understanding of the interviewees' responses was verified by the interviewer summarizing the interviewee's responses at various points during the interview.

5.3.12 Case Studies

The objectivity and reliability of the events included in the timeline of each case were ensured by using two or more sources to verify each event in the sequence. These cases are complete in the sense that they report all of the major developments in each case and provide sufficient continuity in the narrative for the reader to understand how each event is related to the one that preceded it and the one that followed it.

Chapter 6 – Research Findings

6.0 Central Research Question

The central research question in this study has four parts. What institutions and strategies are available for managing political and investment risk in the international oil and gas industry? How and when did they develop? How are they used by organizations in the oil and gas industry? How effective have they been?

The institutions that facilitate the management of risk include oil and gas exploration contracts, domestic courts, national constitutions, bilateral investment treaties, multilateral investment treaties, governmental and non-governmental regulatory agencies and international energy forums. The strategies for managing risk include corporate finance, joint ventures, project finance, alliances and energy diplomacy. The organizations that manage risk include international oil companies, oil service companies, national oil companies, and public and private providers of financial capital and political risk insurance.

The evidence in this study is consistent with North's conclusion that "incremental change [in institutions] comes from the perceptions of the entrepreneurs in political and economic organizations that they [the entrepreneurs] could do better by altering the existing institutional framework at some margin"⁹⁶ and that "institutions do not emerge spontaneously to create and nurture the market, but rather reflect the interests of those players in a position to put them in place".⁹⁷ However, the process by which these institutions are created and evolve is easier to describe in theory than it is to explain in practice, because institutional development takes place in steps; and involves several organizations, some trying to change the institutional environment and others trying to preserve the existing institutional structure.

The institutions in the international oil and gas industry can be arranged in a hierarchy based on their relative importance. The most important institutional mechanisms used by international oil and natural gas companies are contracts, informal relationships and

⁹⁶ Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, UK: Cambridge University Press, 1990), p. 8

⁹⁷ *Ibid*, p. 89-90

transparency. The second most important institutions include domestic law, bilateral treaties, and international courts and tribunals. A third line of defense includes multilateral treaties and international forums. Only a small number of these institutions are the direct result of developments in the oil and gas industry, most have developed in response to the needs of foreign investors in general and have then been adapted for use in the oil and gas industry. The next section presents the finding related to the ten subsidiary research questions formulated in Chapter 2.

6.1 Frequency and Causes of Expropriation (Question #1)

Some analysts have argued that the risk of investing in international markets has increased in the last ten years. The evidence usually cited for this conclusion includes: (1) the Arab Spring and its aftermath; and the wars in Syria and Iraq; (2) resource nationalism and expropriations in the mining, oil and natural gas sector, particularly in Russia and Latin America; and (3) recurring financial crises. However, these three types of events create different types of risk. Military conflicts like those in Syria and Iraq present a risk to the continued operation and potential destruction of energy infrastructure in these countries (i.e. producing wells, pipelines, refineries and export terminals) but not necessarily a risk of expropriation. Resource nationalism creates the risk of contract renegotiation and expropriation, but not necessarily the disruption of operations. (3) Excessive financial leverage and insufficient transparency create the risk of financial crises in the capital markets (commercial banks, investment banks and “non-bank” or “shadow banks”). Question #1 addresses the risk of forced contract renegotiation or expropriation as result of resource nationalism.

Q₁

What evidence exists, if any, that the frequency of expropriation of foreign direct investment has increased in the oil and gas industry; and under what circumstances is it more or less likely to occur?

H₁

The frequency with which oil and natural gas assets have been expropriated has varied over the last 54 years; and is related to the rate of change in oil prices.

Table 1 below demonstrates that the expropriation of oil and gas assets was already underway in the 1960s (20), but increased substantially between 1971 and 1979 (69). Expropriations nearly ceased between 1980 and 2003 and increased again between 2004 and 2011. The average global

price of crude oil decreased from \$1.90 per barrel in 1960 to \$1.80 per barrel in 1970; increased from \$2.24 per barrel in 1971 to \$31.61 per barrel in 1979; then decreased from \$36.83 per barrel in 1980 to \$28.83 per barrel in 2003; and increased from \$38.27 per barrel in 2004 to \$111.26 per barrel in 2011. (See Table A.4, in Appendix I for a year-by-year presentation of the number of expropriations and the change in the price of crude oil.)

Table 1 - Comparison of the Number of Expropriations and the Price of Oil

(Dollars per Barrel and Percent Change)

Year	Number of Expropriations	Annual Average United States Crude Oil Price	Change in the Price of United States Crude Oil in Dollars	Change in the Price of United States Crude Oil in Percent	Annual Average Global Crude Oil Price	Change in the Global Price of Crude Oil in Dollars	Change in the Global Price of Crude Oil in Percent
1960 - 1970	20	\$2.91 – \$3.39	\$.48	16.5%	\$1.90 - \$1.80	(\$0.10)	-5.3%
1971 - 1979	69	\$3.60 - \$25.10	\$21.50	597.2%	\$2.24 - \$31.61	\$29.37	1311.16%
1980 - 2003	3	\$37.42 - \$27.69	(\$9.73)	-26.0%	\$36.83 - \$28.83	(\$7.80)	-21.7%
2004 - 2011	12	\$37.66 - \$87.04	\$49.38	131.1%	\$38.27 - \$111.26	\$72.99	190.7%
2012	1	\$86.46	(\$0.58)	-0.67%	\$111.67	\$0.41	0.37%
2013	0	\$91.17	\$4.71	5.17%	\$108.66	(\$3.01)	-2.77%
2014	0	\$93.44	\$2.27	2.43%	\$104.73	(\$3.93)	-3.75%

Sources:

1. Sergei Guriev, Anton Kolotilin and Konstantin Sonin, “Determinants of Nationalization in the Oil Sector: A Theory and Evidence from Panel Data, *Journal of Law, Economics & Organization*, 27 (2) (2011) p. 301

http://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp

2. United Nations Conference on Trade and Development (UNCTAD)

http://iiadbcases.unctad.org/cases.aspx?col_year=show

Table 1 supports the hypothesis that the number of expropriations increases when the rate of change in the price of oil increases; and decreases when the rate of change in the price of oil decreases. However, in the period from 1960 to 1970, there were 20 expropriations even though the average world oil price declined. One possible explanation for this anomaly is that the governments of the oil producing countries had begun to exert more control over the posted price of oil, but may have been reluctant to raise prices more rapidly because they were uncertain about the consequences of higher oil prices on the world economy and the demand for oil. (The posted price refers to the price at which a company or country is willing to buy or sell a

particular commodity. In markets where an official exchange does not operate, traders will often refer to the posted price(s) of the major companies or countries trading that commodity. The posted price is therefore similar to a company's bid and ask price.) Therefore they chose to expropriate the oil and gas fields, which was a more definitive expression of national sovereignty and at the same time less risky. The section below presents a brief history of expropriation and privatization in the oil and natural gas industry.

First Attempt at Nationalization - 1950 to 1964

In May 1951, after months of unsuccessful negotiations, Iranian Premier Mossadegh and his National Front government nationalized the Anglo-Iranian Oil Company (AOIC). The British government responded by blocking Iran's bank accounts in London and the Royal Air Force compelled at least one Panamanian ship to surrender its Iranian oil at Aden.⁹⁸ In addition, the seven major oil companies, acting as an oligopoly remained united in their opposition to nationalization.⁹⁹ The boycott of Iran's oil was effective because Iran did not have the technicians needed to operate the nationalized facilities; the refineries needed to refine the crude oil; the tankers to transport it, and the distribution system to sell it. Consequently, in 1952 and 1953, Iran sold only 3% of the oil it had sold in the years prior to the attempted nationalization.¹⁰⁰ The nationalization of Iran's oil and gas industry was ultimately unsuccessful during this period.

The Organization of Petroleum Exporting Countries (OPEC) was founded in 1960, but it did not emerge as a force in establishing oil prices until ten years later, during the Tripoli-Tehran crises of 1970 - 1971 (discussed below). However, taking control of the determination of the posted prices in 1960, added an important new structural element to the international oil industry and the power of the oil exporting countries in particular.¹⁰¹

⁹⁸ Charles Lipson, *Standing Guard – Protecting Foreign Capital in the Nineteenth and Twentieth Centuries* (Berkeley: University of California Press, 1985) p. 111

⁹⁹ Ibid 111

¹⁰⁰ Ibid 112

¹⁰¹ Theodore Moran, "Managing an Oligopoly of Would-Be Sovereigns: Dynamics of Joint Control and Self-Control in the International Oil Industry," *International Organization*, Volume 41, No. 4 (Autumn, 1987): 575-607

The Beginning of the End - 1965 to 1971

In 1968, after a successful military coup in Libya, Colonel Qaddafi's Revolutionary Command Council shut down the British and American military bases in Libya. In January 1970, the Revolutionary Command Council demanded a \$.43 per barrel increase in the posted price of oil at a time when the posted price of West Texas Intermediate (WTI) was \$3.35 per barrel. After, nine months of negotiation an agreement was reached between the Libyan government and the international oil companies. The Libyan government would instead receive a 20% increase in royalties and taxes.¹⁰²

In November 1970, The Shah of Iran, surpassed the fifty-fifty profit-sharing terms first established by Venezuela in 1943, by demanding and receiving a tax rate of 55% of the profits from the consortium companies in Iran.¹⁰³ In 1971, Saddam Hussein nationalized the oil industry in Iraq, increasing its ownership to 100%.¹⁰⁴ The period from 1965 to 1971, therefore was a transitional period during which the posted price of crude oil remained essentially unchanged, but the political power of the oil producing countries increased and the power of the IOCs decreased.

The First Oil Crisis – 1972 to 1974

At a meeting in Vienna in mid-September 1973, the OPEC countries demanded a new deal with the oil companies. The Tehran and Tripoli agreements were terminated just two years after they were signed (see above). On October 5, 1973, Egypt and Syria launched a surprise attack against Israel.¹⁰⁵ On October 17, 1973, the Arab Oil Ministers agreed to an embargo, cutting production 5% from the September level, and agreed to continue cutting production by 5% each month until their objective was met, that is, the United States' withdrawal of its support for Israel.¹⁰⁶ Ultimately, the Saudis cut production by 25%. OPEC producers had publicly declared solidarity, but some OPEC governments and the Soviet Union increased production. Consequently, the

¹⁰² Ibid p. 580

¹⁰³ Ibid p. 580

¹⁰⁴ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy & Finance* (Tulsa, OK: PennWell Corporation, 2010) p. 57

¹⁰⁵ Daniel Yergin, *The Prize – The Epic Quest for Oil, Money and Power* (New York: Simon & Schuster, 1991) p. 601

¹⁰⁶ Ibid, p. 607

overall reduction in world oil production was just 7%,¹⁰⁷ but that was enough to increase the average world oil price from \$2.48 per barrel in 1972 to \$11.53 per barrel in 1975; and to increase the average U.S. price from \$3.60 per barrel in 1972 to \$12.21 per barrel in 1975.

The Second Oil Crisis and Nationalization - 1975 to 1979

In 1974, Saudi-Aramco was owned 60 % by the Saudi government, but by 1980 it was owned 100% by the Saudi government.¹⁰⁸ In 1976, the nationalization of the Kuwait Oil Company was completed and was owned 100% by the government of Kuwait.¹⁰⁹ In 1979, during the Islamic Revolution, the National Iranian Oil Company (NIOC) was nationalized and was owned 100% by the government of Iran.¹¹⁰ The average world oil price increased from \$11.53 per barrel in 1975 to \$36.83 per barrel in 1980 and the average U.S. price increased from \$12.21 per barrel in 1975 to \$37.42 per barrel in 1980.

The Era of Privatization - 1994 to 2003

The period from 1994 to 2003 was dominated by partial or complete privatization of national oil companies. For example, between 1989 and 1997, Repsol (a Spanish oil company) was privatized by selling 100% of the company's stock to the public. In 1990 and 1991, no privatizations were reported, but in 1992, *Total* (a French oil company) began the process of privatization. The company sold a 30% share to the public in 1992 and sold the remaining 70% to the public in 1998. In 1993, Oil and Natural Gas Corporation Limited (ONGC, the largest national oil company in India) sold a 16% interest to the public. In 1994, OAO Gazprom (a Russian natural gas company) sold a 62% interest to the public; and Lukoil (a Russian oil company) became 100% privatized. In that same year, a settlement was reached between the government of Peru and a German investor group regarding Peru's expropriation of the undeveloped *Aguaytia* gas field and the producing *Maquia* oil field in central Peru.

In 1995, Indian Oil Corporation Limited (IndianOil) sold 11% of its shares to the public. Public ownership of IndianOil was subsequently increased to 21%. In 1995, *Enersis S.A.* (a subsidiary

¹⁰⁷ Theodore Moran, "Managing an Oligopoly of Would-Be Sovereigns: Dynamics of Joint Control and Self-Control in the International Oil Industry," *International Organization*, Volume 41, No. 4 (Autumn, 1987): 575-607

¹⁰⁸ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy & Finance* (Tulsa, OK: PennWell Corporation, 2010) p. 57

¹⁰⁹ *Ibid*, p. 57

¹¹⁰ *Ibid*, p. 57

of ENI, an Italian oil company) sold a 15% interest in the company to the public; and in 2001 public ownership was increased to 70%. In 1995, *Petróleo Brasileiro S.A.* sold a 49% interest in the company to the public. In the period from 1996 through 1999, there were no significant privatizations, but in 2000, two significant partial privatizations occurred. China Petrochemical Corporation (SINOPEC) began the sale of a 24% interest in the company to the public; and PetroChina Company Limited (PetroChina) began the sale of a 14% interest in the company to the public. In 2001 the Chinese National Offshore Oil Corporation (CNOOC) sold a 29% interest in the company to the public and Statoil (a Norwegian national oil company) sold a 38% interest to the public.¹¹¹ In 2002, no significant privatizations occurred. (For a list of privatizations during this period see Table A.6 in Appendix II.) Therefore, between 1994 and 2003 the oil industry was dominated by privatizations rather than expropriations, even though the average global price of crude oil increased from \$15.82 in 1994 to \$28.83 in 2003.

*Resurgence of Expropriations - 2004 to 2011*¹¹²

Beginning in 2004, the frequency of expropriation began to increase again. In 2003, the Russian government presented OAO Yukos, a private sector Russian oil company, with an invoice for \$27 billion in back taxes allegedly owed by the company. Yukos was unable to pay the taxes and was subsequently declared bankrupt in a Russian court. Yukos management valued the company at \$20 billion. In 2004, its assets were sold to other Russian oil companies and its president was convicted on fraud charges and imprisoned.

In 2006, there were instances of contract renegotiation, contract termination and expropriation. (1) The state of Alaska's agreement with the three oil companies operating on Alaska's North Slope was modified to include an additional 20% tax on their profits in Alaska. (2) Occidental Petroleum filed a claim against Ecuador in response to Ecuador's decision to terminate Occidental's exploration and development contract (3) Bolivia announced that Brazil's state-run company, *Petróleo Brasileiro S.A.* (Petrobras), Royal Dutch Shell PLC, and other private firms would have to transfer ownership of their Bolivian retail gasoline networks to state-owned *Yacimientos Petrolíferos Fiscales Bolivianos* (YPFB) within one month.

¹¹¹ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 62

¹¹² Oil and Gas Journal website, http://www.ogj.com/_search?q=expropriation, Last accessed on May 25, 2014

In 2007, there were two reports of contract renegotiation and one report of expropriation. (1) Venezuela increased the royalty and tax rates on the oil companies operating in Venezuela. Venezuela's "take" increased from \$33.4 billion in 2007 to \$38.5 billion in 2008. (2) The Russian government insisted that *Gazprom* be allowed to purchase a 50% plus one share interest in the Sakhalin – 2 Gas Field in Russia for \$7.45 billion. Shell was forced to give up majority control in one of its most profitable assets after having invested over \$6 billion to develop the project. (3) Venezuela expropriated ExxonMobil and ConocoPhillips' assets in Venezuela. ConocoPhillips valued its assets in Venezuela at \$4.5 billion and indicated that it would take a charge against net income for the full amount. The IOCs that were willing to accept Venezuela's terms lost controlling interest in their operations in Venezuela.

In 2010, there was one expropriation and one threat of expropriation. (1) Venezuela nationalized eleven oil rigs owned by Helmerich & Payne (HP). HP filed suit in Washington, D.C. Federal District Court seeking \$32 million in back payments for unpaid services and several hundred million dollars for the value of its 11 drilling rigs. (2) Ecuador threatened to nationalize the oil assets of any international oil companies that refused to replace their production sharing agreements with fixed-fee contracts.

In 2011, Madagascar Oil of Houston halted operations in Madagascar because it believed its operations might be expropriated. In 2012, YPF (*Yacimientos Petrolíferos Fiscales*, a subsidiary of Repsol, valued at \$18 billion, of which Repsol owned a 57.4% interest, was expropriated by the government of Argentina.

The preceding analysis suggests that the frequency with which oil and natural gas assets have been expropriated is a function of the change in the price of crude oil relative to the long term price trend and not the price of oil at a particular point in time. (For a more mathematically rigorous treatment of this question see the study by Guriev, Kolotilin and Sonin summarized in Appendix II).

Absolute and Relative Significance of Expropriation

For the firms whose assets are expropriated, the impact can be substantial and therefore must always be a consideration for oil and gas companies. One measure of the relative impact of

expropriations on the industry is to compare the value of the properties expropriated in recent years to the total amount of capital spending and exploration expenditures (CAPEX) in the same years. As already noted, in 2010, there was one expropriation and one threat of expropriation. Venezuela nationalized eleven oil rigs owned by Helmerich & Payne (HP). Helmerich & Payne filed suit in Washington, D.C. Federal District Court for \$32 million in back payments for unpaid services and several hundred million dollars for the value of its 11 drilling rigs. Assuming that the 11 rigs were worth \$400 million, the total value of the lawsuit is approximately \$432 million. This is a relatively small number compared to the \$457.6 billion in CAPEX made by the oil and gas industry in 2010. In 2011, Madagascar Oil of Houston halted operations in Madagascar because it believed its operations might be expropriated. In 2011, CAPEX made by the oil and gas industry was \$556.1 billion.

In 2012, YPF (*Yacimientos Petrolíferos Fiscales*, a subsidiary of Repsol, valued at \$18 billion, of which Repsol owned a 57.4% interest, was expropriated by the government of Argentina. In 2012, the CAPEX made by the oil and gas industry was \$617.2 billion. The value of the expropriation \$10.3 billion ($\$18 \text{ billion} \times .574$) was relatively small compared to the value of CAPEX in 2012.

6.2 Origins and Resolution of Contract Disputes (Question #2)

Most disputes are not the result of expropriation, but rather the result of a disagreement over the interpretation of specific terms and conditions in a contract; developments that were not foreseen when the contract was prepared; or changes in the host government's policies. This section examines three questions:

Q₂

- (1) How frequent are investment disputes?*
- (2) How are disputes, usually resolved?*
- (3) What circumstances are more or less likely to lead to disputes?*

H₂

- (1) It is not clear how many disputes arise between IOCs and host governments because,*
- (2) Most disputes are resolved by the parties on their own without outside assistance.*
- (3) Disputes are more likely to arise when the quality of governance and the rule of law are low.*

Comparison of the Number of Disputes within and outside the Oil and Gas Industry

The United Nations Conference on Trade and Development (UNCTAD) lists 597 cases that have been brought before various international courts or tribunals including the International Centre for the Settlement of Investment Disputes (ICSID) established in 1966, United Nations Commission on International Trade Law (UNCITRAL) established in 1964, International Chamber of Commerce (ICC) established 1919, Stockholm Chamber of Commerce Arbitration (SCC) established 1917, International Centre for the Settlement of Investment Disputes Additional Facilities (ICSID/AF) established 1978, Cairo Centre Rules (CRCICA) established 1979 and the Permanent Court of Arbitration (PCA, established 1899). Of these 597 cases, 68 are related to the oil and gas industry or approximately 11%.¹¹³

Comparison of Disputes and Crude Oil Prices

There were no expropriations between 1996 and 2002 and 13 expropriations between 2003 and 2012. Between 1996 and 2002, 10 cases were brought before an international court or tribunal; and between 2003 and 2012, 58 cases were brought before an international court or tribunal. The frequency of these cases therefore, exhibit the same pattern observed regarding expropriations, that is, forced renegotiations by host countries and the number of disputes brought before an international court or tribunal increased when crude oil prices were rising rapidly relative to the long term trend in crude oil prices.

Comparison of Transactions and Disputes

In 2012 and 2013, the total number of new deals (royalty/tax agreements, production sharing agreements, service contracts, joint ventures, acquisitions and divestitures) in the oil and natural gas industry, was 1,800 and 1,400, respectively.¹¹⁴ However, no cases were brought before an international court or tribunal in 2013, 3 cases were brought before an international court or tribunal in 2012, 4 in 2011, 5 in 2010, 2 in 2009 and 8 in 2008. This suggests that most IOCs and host countries comply with the terms and conditions of the contracts they sign and resolve most disputes on their own.

¹¹³ UNCTAD, http://iidbcases.unctad.org/cases.aspx?col_year=show

¹¹⁴ E & Y, Global Oil and Gas Transactions Review 2013, [http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/\\$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf)

Comparison of Disputes and Institutional Effectiveness

Table 2 below summarizes the 68 cases reported by UNCTAD and compares them to the ratings for the quality of governance given to the host country defendants by the World Governance Project.¹¹⁵ This rating system includes six measures of governance: Voice and Accountability, Political Stability/Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. This rating system uses a scale from 0 to 100, in which 0 is the worst possible governance rating and 100 is the best possible rating. These six measures are described below.

Voice and Accountability “captures the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media”. *Political Stability and Absence of Violence/Terrorism* “measures the likelihood of political instability and/or politically-motivated violence, including terrorism”. *Government Effectiveness* “reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies”. *Regulatory Quality* “reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development”. *Rule of Law* “reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence”. *Control of Corruption* “reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests”.¹¹⁶

Voice and Accountability and Political Stability/Absence of Violence are not included in the analysis below because these two measures are related to individual citizens’ rights and personal safety whereas the other four measures are directly related to the credibility of the government’s commitment to policies affecting investors, regulatory fairness and consistency, administration

¹¹⁵ Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi, “The World Governance Project,” 2013 Update, www.govindicators.org

¹¹⁶ *Ibid*

of impartial justice affecting investment disputes and control of corruption influencing investment and investor rights.

Table 2 - Oil and Gas Disputes Reported by UNCTAD and Governance/Rule of Law
(N = 68)

Defendant Country	Number of Cases	Number of Bilateral Treaties	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption	Average
Albania	1	43	45	56	35	27	41
Algeria	1	47	34	9	26	36	26
Argentina	15	58	45	19	29	39	33
Azerbaijan	1	35	24	34	25	13	24
Bangladesh	2	30	22	20	19	21	21
Bolivia	3	19	43	22	16	27	27
Bulgaria	1	68	60	69	51	52	58
Canada	2	34	95	96	95	95	95
Ecuador	9	18	37	15	12	28	23
Egypt	2	101	25	33	40	34	33
Georgia	4	31	70	73	55	64	66
Grenada	1	2	62	62	59	69	63
Jordan	1	52	54	57	63	61	59
Kazakhstan	6	42	40	38	31	21	33
Kyrgyzstan	1	29	29	40	12	13	24
Nigeria	1	21	16	25	10	11	16
Romania	1	82	44	69	56	51	55
Russian Federation	5	72	41	39	24	16	30
Slovak Republic	1	54	74	80	64	60	70
South American Govt	1	NMF	NMF	NMF	NMF	NMF	NMF
Tajikistan	1	32	18	18	11	10	14
Trinidad & Tobago	1	12	65	57	50	50	56
Ukraine	1	67	32	29	26	16	26
United States	1	46	90	88	91	89	90
Venezuela	5	28	13	5	1	7	7
Total	68	1023					

Source: United Nations Conference on Trade and Development (UNCTAD)

http://iiadbcases.unctad.org/cases.aspx?col_year=show

Table 2 shows that the countries in which the largest number of disputes arose have relatively low ratings on these measures (Argentina, Bolivia, Ecuador, Georgia, Kazakhstan, the Russian Federation and Venezuela). However, there are countries with low ratings, but a small number

of disputes. This could be partly the result of a smaller number of projects in these countries (Algeria, Azerbaijan, Bangladesh, Egypt, Kyrgyzstan, Tajikistan and Ukraine).

Comparison of Rules/Venues

Of the 68 cases in the oil and gas sector, 47 were brought before the International Centre for the Settlement of Investment Disputes (ICSID), 9 before the United Nations Commission on International Trade Law (UNCITRAL), 7 before the Stockholm Chamber of Commerce Arbitration (SCC) and the remaining 5 before the Arbitration Institute of the Stockholm Chamber of Commerce; ICSID Additional Facilities Rules; and the Permanent Court of Arbitration.

Possible reasons for bringing a dispute before an international court or tribunal include: (1) the failure of the contract to provide for the specific contingency that has arisen; (2) repudiation of a contract by the host state; (3) a lack of confidence in the fairness of the domestic courts in the host country; or (4) the inclusion of a provision in the contract that specifies that an international court or tribunal is to be used if a dispute cannot be resolved by the parties on their own. The relationship between contracts, domestic courts and bilateral investment treaties, will be discussed in more detail in the section on legal systems and investment and again in the case studies. The next section reviews the most common provisions in oil and gas exploration and production contracts.

6.3 - Contract Provisions in Oil and Gas Contracts (Question #3)

It is almost inevitable that at some point in the life of a contract, the parties will disagree about something. This is made more likely because oil and gas contracts may be in operation for 10 to 20 years. The disagreement may be about whether one of the parties has done what they said they would do; in the way they promised to do it; and within the time-frame they agreed to do it. In addition, it is common for oil and gas contracts to include provisions specifying that some issues are to be negotiated at a later date. This section summarizes the contract provisions that are most often included in oil and gas contracts to minimize disputes and resolve conflicts.

Q₃

What contract provisions are most often included in an oil and gas contract to limit the number of disputes and resolve those that occur?

H₃

Most contracts include references to “good faith”, “use reasonable efforts”, and “a timely manner”. Specific provisions in contracts include provisions for: dispute resolution, stabilization or equilibrium, choice of law, domestic or foreign courts, arbitration and arbitration rules.

Good Faith

“Good faith” is a term that is often used in connection with issues regarding whether the parties to a contract have done what they said they would do, in the way they promised to do it and within the time-frame they agreed to do it. For example:¹¹⁷

Excerpt from a Libyan Exploration and Production Sharing Agreements (EPSA)

13.5.2. “...shall proceed in good faith to negotiate a gas sales agreement incorporating the principles set forth in Article 13.4”.

(This provision is relevant when natural gas is produced from a project that was undertaken with the expectation that it would produce oil.)

Excerpt from Azerbaijan Agreement

15.2. (cd) - “SOCAR [State Oil Company of Azerbaijan Republic] and Contractor shall diligently negotiate each, such Supplemental Agreement (and the relevant Sales Agreement) in good faith”.

Accounting Procedures

In an appendix to the contract there is usually a section titled Accounting Procedures which is referred to in the main contract.

Excerpt from an Appendix on Accounting Procedures

“...if any of such methods[of accounting] prove to be unfair or inequitable to the Contractor then the Parties will meet and in good faith endeavor to agree on such changes as are necessary to correct any unfairness or inequity”.

Excerpt from Iraq’s Technical Service Agreement

2.3 - “Discovered but undeveloped reservoirs, as defined in Annex D, may be developed and produced under this Contract but shall be subject to a separately agreed remuneration fee which the Parties undertake, in good faith, to agree”.

¹¹⁷ Tim Boykett, Marta Peirano, Simone Boria, Heather Kelley, Elisabeth Schimana, Andreas Dekrout, Rachel OReilly, “Oil Contracts - How to Read and Understand a Petroleum Contract,” Times Up Press Industriezeile 33b 4020 Linz Austria 2012. <http://openoil.net/contracts-booksprint/>

Two other phrases frequently used in oil and gas contracts are the obligation to "use reasonable efforts" or to do something or deliver something "in a timely manner". Although domestic law may provide some guidance on what "reasonable efforts" or "deliver in a timely manner" require of the parties, there will occasionally be disputes whether what has been done constitutes "reasonable efforts" or "timely manner". To reduce the ambiguity of such provisions the contract may include a reference to "generally accepted international standards or practices".¹¹⁸ However, there can be disputes over the interpretation of terms like "generally accepted international standards or practices" or "good petroleum practice". (See section on environmental provisions below for a definition and example of these terms.)

Most disputes arise when one party's interpretation of a provision results in the other party having to spend more money or receive less money than it believes it should under the terms of the contract. An oil or gas contract always has a section that specifies the procedures the parties will use to resolve disagreements. This is frequently referred to as the "Dispute Resolution" section or the "Arbitration" section and is frequently arranged in a hierarchy.

Excerpt from the Iraqi Model Form Technical Services Contract in Article 37.¹¹⁹

"The Parties shall endeavor to settle amicably any dispute (the "Dispute") arising out of or in connection with or in relation to this Contract or any provision or agreement related thereto".

"Where no such settlement is reached within thirty (30) days of the date when one Party notifies the other Party of the Dispute, then the matter may, as appropriate, be referred by the Parties to their senior management for resolution".

"Where no such settlement is reached within thirty (30) days of such referral to management, any Party to the Dispute may refer the matter, as appropriate to an independent expert or, by giving sixty (60) days-notice to the other Party, refer the matter to arbitration as stipulated hereunder!"

"If any Dispute arises between the Parties with respect to technical matters, such Dispute may, at the election of either Party, be referred to an independent expert ("Expert") for determination!"

"All Disputes arising out of or in connection with this Contract, other than those Disputes that have been finally settled by reference to either senior management or an Expert, shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by three arbitrators appointed in accordance with said Rules."

¹¹⁸ Ibid

¹¹⁹ Ibid

In most cases, the parties will first try to resolve disputes themselves, whether or not the contract requires them to do so. Doing so is less expensive and less prejudicial to the relationship, than bringing in outside experts or arbitrators. Only when resolution of the dispute on their own appears impossible, will the parties resort to other dispute resolution mechanisms. The contract may specify the appointment of an expert for technical issues for which there is objective market or accounting data. Disputes that involve more subjective issues of contract interpretation will most likely be referred to a mediator or arbitration tribunal.¹²⁰

Stabilization Contract Provisions

Many things can change during the life of a project in which billions of dollars may be invested and which may extend over 25 years or more. Government policy, a country's economic development priorities or legal environment can all change as a result of elections or revolutions. Stabilization contract provisions have been used to secure guarantees against changes in the economic policies or legal environment within which a contract was originally negotiated.

Specific changes that a company might seek protection against include: (1) changes in the fiscal regime, for example, increases in existing taxes or royalties, or the imposition of new ones (2) changes to laws that affect the conduct of petroleum operations, for example labor laws imposing more stringent or additional requirements on worker safety.¹²¹

Excerpt from a Ghanaian Production Sharing Contract

26.2 - ".....As of the Effective Date of this Agreement and throughout its Term, the State guarantees the Contractor the stability of the terms and conditions of this Agreement as well as the fiscal and contractual framework hereof, specifically including those terms and conditions and that framework that are based upon or subject to the provisions of the laws and regulations of Ghana (and any interpretations thereof) including without limitation the Petroleum Income Tax Law, the Petroleum Law, the GNPC Law and those other laws, regulations and decrees that are applicable hereto. This Agreement and the rights and obligations specified herein may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by the Parties. Any legislative or administrative act of the State or any of its agencies or subdivisions which purports to vary any such right or obligation shall, to the extent sought to be applied to this Agreement, constitute a breach of this Agreement by the State."

¹²⁰ Ibid

¹²¹ Ibid

However, most national governments perceive such stabilization provisions to be an infringement on their national sovereignty.¹²² Although stabilization clauses exist in older petroleum contracts, they are becoming increasingly rare. These clauses are often referred to as "freezing clauses" because they attempt to freeze the host country's law in place, at least as it applies to a particular contract.

A more recent alternative to a stabilization provision is the "equilibrium provision." The purpose of an equilibrium provision is similar to a stabilization provision, that is, it is intended to preserve the overall economic position of the oil company without appearing to infringe the national sovereignty of the host country. If one of the parties is adversely affected by a change in the country's law, both parties agree to pursue changes to the contract that will restore the adversely affected party to the financial position they enjoyed before the law was changed. For example, if the country modifies its tax law and as a consequence the taxes imposed on the profits of the oil company are increased by 10%, the parties would seek to agree an amendment to some other terms of the petroleum contract to compensate the oil company for the increased tax it must pay.¹²³ For example:

Excerpts from Typical Petroleum Contract

Example 1

"Without prejudice to other rights and obligations of the Parties under the Agreement, in the event that any change in the provisions of any Law, decree or regulation in force in [name of country] occurs subsequent to the signing of this Agreement which adversely affects the obligations, rights and benefits hereunder, then the Parties shall agree on amendments to the Agreement to be submitted to the competent authorities for approval, so as to restore such rights, obligations and forecasted benefits."

Example 2

"...if after the Effective Date, the financial interests of Contractor are adversely and substantially affected by a change to the Law which was in force on the Effective Date, or by revocation, modification or non-renewal of any approvals, consents or exemptions granted to Contractor pursuant to this Contract (other than as a result of Gross Negligence or Willful Misconduct of Contractor or Operator) the Parties shall, within ninety (90) days, agree on necessary adjustments to the relevant provisions of this Contract in order to maintain Contractor's financial interests under this Contract reasonably unchanged."

¹²² Ibid

¹²³ Ibid

Domestic and Foreign Courts

When direct negotiations, mediation and the employment of experts do not lead to a resolution of the dispute, the next step is a domestic court proceeding or international arbitration. Unless a contract includes provisions requiring the parties to use an arbitration process, the first step would be to bring the dispute before a domestic court of the relevant country or countries. However, the reality is that in many jurisdictions the court process may not be independent, or may be slow and international investors generally (not just oil companies) prefer not to take that risk. Although citizens in the host country may find the suggestion that their courts are not impartial or fair insulting, most contracts include a provision specifying arbitration in a court or tribunal outside the host country.

Arbitration and Arbitration Rules

Arbitration is a process for resolving disputes that could not be resolved by some other means. For the parties involved, particularly oil companies, arbitration has two main advantages over a domestic court proceeding. First, the arbitration is not carried out in the country with which the oil company has the dispute, increasing the probability that the outcome will be fair and impartial. Second, arbitration procedures and awards are, at least in theory, confidential and could therefore be an advantage to an oil company because it allows the company to keep the terms and conditions of its original agreements and subsequent settlements private, thereby protecting its proprietary information and its competitive position. The host government may also perceive the confidentiality of arbitration to be an advantage for competitive reasons or when signing bonuses or other controversial payments are involved (see discussion of signing bonuses in Section 6.10.4).

Although the arbitration takes place outside the host country, this is a separate issue from the question of which country's law will be used in adjudicating the dispute. For example, if a dispute arises under a petroleum contract in Ghana, then Ghanaian law applies to the contract, and an arbitration process would decide the dispute applying Ghanaian law even if the arbitration process takes place in the investor's country or a third country.

Typical features of an arbitration provision in a contract include:

- A clause specifying that the arbitration is to be conducted in accordance with the rules of a particular arbitration institution. There are a several recognized international arbitration institutions each of which has a set of rules that will apply to the arbitration process. It was observed previously, that the rules most often used are the rules of the International Centre for Settlement of Investment Disputes ("ICSID"), UNCITRAL rules, and International Chamber of Commerce Rules (ICC).
- A clause specifying where the arbitration is to take place. Often, a "neutral" venue is chosen, that is, one that is not in the country with which the contract is made and not in the country in which the oil company or its parent organization is domiciled. Choices of independent venues might include, Paris, London or Stockholm, but as previously stated the law to be applied is the relevant governing law of the contract, not the law of the venue.

Excerpt from Azerbaijan Joint Development and Production Sharing Contract

"...shall be governed and interpreted in accordance with the principles of law common to the law of the Azerbaijan Republic and English law, and to the extent that no common principles exist in relation to any matter, then in accordance with the principles of the common law of Alberta, Canada..."

Other provisions include:

- A clause specifying the number of arbitrators that will determine the dispute. Frequently there are three. This allows each party to select one arbitrator and then to jointly appoint a third or for the third to be appointed pursuant to the relevant arbitration rules.
- A clause specifying the language in which the arbitration is to be conducted, usually a major international language that has some (historical) relationship to the country to which the dispute relates such as English, French, Spanish or Portuguese.
- A clause specifying who is responsible for paying the cost of the arbitration. Usually, the expense of arbitration is shared equally among the Parties.¹²⁴

¹²⁴ Ibid

Environmental Provisions

The Deepwater Horizon oil spill in the Gulf of Mexico in 2010 was a reminder of the environmental risk associated with the exploration and production of oil and natural gas. Although accidents on this scale are rare, all oil and gas projects involve environmental risk. For this reason, most oil and gas contracts contain clauses related to nine major environmental issues: (1) environmental standards; (2) stabilization; (3) environmental impact assessment; (4) access to protected areas; (5) access to water and other natural resources; (6) gas flaring; (7) responding to emergencies and accidents; (8) decommissioning and remediation; (9) liability, indemnity and insurance.¹²⁵ Examples of (1), (3), (7) and (9) are presented below:

Environmental Standards

A Cambodian contract defines “good petroleum practice” as:

*“Good Petroleum Industry Practices means the standards and practices, and exercise of that degree of skill, prudence and foresight that would reasonably be expected of persons carrying out international petroleum operations, and adherence to generally accepted standards of the international petroleum industry, including sound environmental provisions”.*¹²⁶

Environmental Impact Assessment

Excerpt from the Agreement for the Azeri and Chirac Fields in Azerbaijan

26.4 - "... an environmental baseline studyto be carried out by a recognized international environmental consulting firm selected by Contractor, and acceptable to SOCAR [State Oil Company of Azerbaijan Republic]. SOCAR shall nominate representatives to participate in preparation of the study in collaboration with such firm and Contractor representatives."

Responding to Emergencies and Accidents

Excerpt from a PSC (Production Sharing Agreement) in Ghana

*“If Contractor does not act promptly so as to control, clean up or repair any pollution or damage, GNPC [Ghana National Petroleum Corporation] may, after giving Contractor reasonable notice in the circumstances, take any actions which are necessary, in accordance with accepted petroleum industry practice and the reasonable costs and expenses of such actions shall be borne by Contractor and shall, subject to Article 17.5 be included as Petroleum Costs”.*¹²⁷

¹²⁵ Kyla Tienhaara, "Foreign Investment Contracts in the Oil & Gas Sector: A Survey of Environmentally Relevant Clauses." *Sustainable Development Law & Policy* 11, no. 3 (2011): 15-20, 39-40.

¹²⁶ Agreement between the Royal Government of Cambodia, Cambodian National Petroleum Agency, Chevron Overseas Petroleum (Cambodia) Limited, Moeco Cambodia Co. Ltd and Woodside South East Asia Pty, Ltd., Article 1.2 Definitions (August 15, 2002)

¹²⁷ Petroleum Agreement Republic of Ghana; Tullow Ghana Limited; Sabre Oil and Gas Limited; Kosmos Energy. Ghana hc, art. 17.7 (Mar. 10, 2006) (Ghana), <http://sec.edgar-online.com/kosmos-energy-ltd/s-1a-securities-registration-statement/2011/03/03/section58.aspx>

Liability and Indemnity

An example of an indemnity clause appears at 19.1 in the LOGIC Standard Offshore Service Contract:

*“19.1 The CONTRACTOR shall be responsible for and shall save, indemnify, defend and hold harmless the COMPANY GROUP from and against all claims, losses, damages, costs (including legal costs) expenses and liabilities in respect of: (a) loss of or damage to property”*¹²⁸

In a contract between Slessor and Vecto Gray, clause B13 states that:

“...the parties mutually and irrevocably undertake to release, defend and indemnify each other for damage to any property, and/or injury to/or death of the personnel of the others, arising out of or in connection with the Work, howsoever caused”.

Clause 2 in a standard Deeds of Adherence, states that the signatories are obligated to:

“.... be solely responsible for and shall defend, indemnify and hold harmless the other Signatories and the other members of their respective Groups against all Claims arising from, out of, or relating to the Services in connection with:
(i) personal injury to or sickness; and
(ii) loss of, recovery of, or damage to any Property; and
(iii) Consequential loss¹²⁹

This section presented the contract provisions most often included in oil and gas contracts for the purpose of minimizing and resolving disputes and explained how these provisions are applied in the resolution of disputes when the arbitration or court proceeding take place outside the host country. It also demonstrated that there is a well-defined set of procedural rules for resolving disputes when the contracting parties cannot resolve them on their own. The next section reviews the most common provisions contained in bilateral investment treaties and evaluates their effectiveness in resolving disputes in the international oil and gas industry.

6.4 – Provisions in Bilateral Investment Treaties (Question #4)

Contracts are the principal means of documenting the rights and obligations of the parties participating in a specific project. Bilateral investment treaties are the means of documenting more broadly the rights and obligations of host countries and foreign

¹²⁸ LOGIC, ‘Standard Contracts for the UK Offshore Oil and Gas Industry: Service Onshore & Offshore’ <http://www.logic-oil.com/sites/default/files/documents/Services%20Onshore%20and%20Offshore%20Edition%202.pdf>

¹²⁹ LOGIC ‘Mutual Indemnity And Hold Harmless Deed’ (2012) <http://www.logic-oil.com/sites/default/files/documents/IMHH%202012%20Deed.pdf> Accessed 12th April 2013

investors. This section examines the content and the effectiveness of bilateral investment treaties.

Q₄

(1) What are the primary provisions in a bilateral investment treaty and how often are they used in dispute resolution?

(2) How effective have they been in resolving disputes?

H₄

(1) Most oil and gas contracts reference a bilateral investment treaty as a mechanism for resolving disputes, but a relatively small number of disputes actually require the application of a bilateral investment treaty.

(2) Obtaining compensation in an international court or tribunal is often a slow process.

Bilateral Investment Treaties

Bilateral Investment Treaties (BITs) are agreements between governments in which both governments agree to provide certain protections to investments by nationals of the other country in their country. The most common and important clauses included in bilateral treaties are presented below.

Choice of Law Clauses

It was previously observed, that oil and gas contracts usually include a clause specifying the use of host country law in the resolution of disputes. Bilateral investment treaties also include a provision specifying the use of the law of the host state in international court proceedings and arbitration tribunals, but they also refer to other sources of law. Most bilateral treaties refer to four sources of law: (1) the bilateral investment agreement itself (the treaty); (2) the municipal (domestic law) of the host state; (3) the provisions of the contract relating to the investment between the parties; and (4) general principles of international law. An example of this choice of law clause is contained in the bilateral investment treaty between Argentina and the United Kingdom (1990), which provides at Article 8(4):

“The arbitral tribunal shall decide the dispute in accordance with the provisions of this Agreement, [bilateral treaty], the laws of the Contracting Party [host country government] involved in the dispute, including its rules on conflict of laws, the terms of any specific agreement concluded in relation to such an investment and the applicable principles of international law. The arbitration decision shall be final and binding on both Parties”.

Bilateral investment treaties usually include an arbitration clause identifying the arbitral body to which disputes may be submitted. Often the parties name the International Centre for Settlement of Investment Disputes (ICSID).

Treaty Titles and Preambles

Most bilateral investment treaties are formally called “agreements for the promotion and protection of investment”. In some agreements, the title refers to reciprocal or mutual protection. Treaty titles are usually followed by short preambles, which focus on the objective of promoting and protecting investment, and providing favorable conditions for foreign investment.¹³⁰ China-Germany (2003) is a recent example of a typical preamble:

*“Intending to create favorable conditions for investment by investors of one Contracting Party in the territory of the other Contracting Party,
Recognizing that the encouragement, promotion and protection of such investments will be conducive to stimulating business initiative of the investors and will increase prosperity in both States,
Desiring to intensify the economic co-operation of both States.....”*

National Treatment and Most Favored Nation Treatment

One of the main objectives of international trade and investment law is to limit state actions that discriminate based on the nationality of the foreign individual, entity, good, service or type of investment.¹³¹ In most bilateral investment agreements national and most favored nation treatment are combined into one provision.

Article 4(2), Chile-Egypt (1999), is an example of this:

“Each Contracting Party shall accord investments of the investors of [the] other Contracting Party in its territory a treatment which is not less favorable than that accorded to investments made by its own investors or by investors of any third country, whichever is more favorable”.

International Standards of Treatment

Standards of treatment based on fairness and equity existed before the development of modern international investment agreements (IIAs). Fair and Equitable treatment clauses (FETs) used in bilateral investment treaties (BITs) and other international investment agreements appeared in early international economic agreements such as the Havana Charter for an International Trade Organization (1948) and the Economic Agreement of Bogota (1948), as well as in the United

¹³⁰ Andrew Newcombe and Lluís Paradell, *Law and Practice of Investment Treaties: Standards of Treatment* (The Netherlands: Kluwer Law International, 2009) p. 123

¹³¹ *Ibid*, p. 147

States Friendship, Commerce and Navigation (FCN) treaties. The first use of the Fair and Equitable treatment clause in an international investment agreement can be found in Article I of the Draft Convention on Investments Abroad proposed by Hermann Abs and Lord Shawcross in 1959:¹³²

*“Each Party shall at all times ensure fair and equitable treatment to the property of the nationals of the other Parties. Such property shall be accorded the most constant protection and security within the territories of the other Parties and the management, use and enjoyment thereof shall not in any way be impaired by unreasonable or discriminatory measures”.*¹³³

The Organizations for Economic Cooperation and Development (OECD, created in 1961), subsequently produced its own draft convention on the protection of foreign property in 1967, entitled the Convention on the Protection of Foreign Property, which includes a fair and equitable treatment clause along similar lines.¹³⁴ However, this treaty has not yet come into force.

In its notes and comments to Article 1, of the OECD Convention a clear reference was made to the source of the standard: “the standard conforms to the ‘minimum standard’ which forms part of customary international law”.¹³⁵ Although the 1967 Draft OECD Convention failed to gain sufficient support among OECD countries for adoption as a multilateral convention, its substantive provisions have served as an important model for bilateral investment treaties.¹³⁶ By referring to the OECD model and using it systematically, bilateral investment treaties are effectively referring to this standard as defined by the OECD Draft Convention of 1967.¹³⁷

Because most treaties do not define the substantive content of the standard to be applied, but only refer to an unqualified formulation of the standard, or to one qualified by references to (customary) international law, the contemporary meaning of the “*fair and equitable treatment*”

¹³² United Nations Conference on Trade and Development, Fair and Equitable Treatment – UNCTAD Series on International Investment Agreements II, 2012

¹³³ Hermann Abs and Lord Hartley Shawcross, The Proposed Convention to Protect Private Foreign Investment, *Journal of Public Law*, 9:115-124 (1960)

¹³⁴ United Nations Conference on Trade and Development, Fair and Equitable Treatment – UNCTAD Series on International Investment Agreements II, 2012

¹³⁵ Organization for Economic Cooperation and Development (OECD), *Council Resolution of 12 October 1967 on the Draft Convention on the Protection of Foreign Property, International Legal Materials* (OECD, 7:117-143, 1967)

¹³⁶ Andrew Newcombe and Lluís Paradell, *Law and Practice of Investment Treaties: Standards of Treatment* (The Netherlands: Kluwer Law International, 2009) p. 30

¹³⁷ United Nations Conference on Trade and Development, *Fair and Equitable Treatment – UNCTAD Series on International Investment Agreements II* (UNCTAD, 2012)

standard still depends on interpretations by individual arbitral tribunals, which are not subject to any effective appellate review. This makes the standard vulnerable to inconsistent interpretation, resulting in uncertainty regarding its meaning.¹³⁸

Minimum Standard of Treatment

Unlike the national and most favored nation (MFN) treatment standard discussed in the previous section, in which the standard of treatment is contingent on the treatment of some other party or parties, the substantive content of a minimum standard is not determined by reference to the treatment of other investors or investments. Minimum standards of treatment therefore provide a treaty defined baseline or, in the words of one international investment tribunal “a floor below which treatment of foreign investors must not fall, even if a government were not acting in a discriminatory manner”.¹³⁹ In practice this is still problematic, because there is often disagreement about what constitutes a “minimum standard” of treatment.

Laws Related to Expropriation

International expropriation law is intended to mediate and to the extent possible, reconcile two general principles of international law: (1) that states exercise permanent sovereignty over their territories and natural resources; and (2) that states must respect the acquired rights of foreigners. The exercise of permanent sovereignty means that private property is not inviolable. Unless the state has made specific commitments not to nationalize a specific investor’s assets, states have a right to tax, regulate or expropriate an investor’s assets provided the state and the expropriation meet four conditions. (1) The expropriation must be for a public purpose, (2) must be done in accordance with due process, (3) requires that it be done in a non-discriminatory manner, and (4) that it be accompanied by prompt and equitable compensation.¹⁴⁰

The expropriation and compensation provision of Article IV.2.1 of the draft Multilateral Agreement on Investment (MAI) provides:

“2.1. A Contracting Party shall not expropriate or nationalize directly or indirectly an investment in its territory of an investor of another Contracting Party or take any measure or measures having equivalent effect (hereinafter referred to as “expropriation”) except:

¹³⁸ Ibid

¹³⁹ Andrew Newcombe and Lluís Paradell, *Law and Practice of Investment Treaties: Standards of Treatment* (The Netherlands: Kluwer Law International, 2009) p. 233-234

¹⁴⁰ Ibid, p. 321

- a.) for a purpose which is in the public interest*
- b.) on a non-discriminatory basis,*
- c.) in accordance with due process of law, and*
- d.) accompanied by payment of prompt, adequate and effective compensation in accordance with Articles 2.2 to 2.5 below:”*

Three issues in international expropriation law have been particularly contentious. First, what economic interests can be expropriated? Second, what government measures amount to expropriation? Third, what is the standard of compensation payable upon expropriation? International investment agreements (IIAs) address each of these issues, but are still open to interpretation.¹⁴¹ Each is examined below.

The range of economic interests that international investment agreements protect depends on the definition of ‘investment,’ which most IIAs define broadly. Under customary international law, both tangible property (i.e. land, equipment and inventory) and intangible property (i.e. company shares, dividends, bank accounts, contract rights, intellectual property and goodwill) can be expropriated.

Bilateral investment treaties typically contain a provision prohibiting either country from expropriating the investments of nationals of the other country without due process or just compensation or in violation of international law. The majority of expropriation cases in international law have involved a deprivation of a foreign investor’s acquired rights and a corresponding acquisition, or appropriation, of those acquired rights by the state or a third party designated by the state, for example, an NOC.¹⁴² This is usually referred to as direct expropriation.

A deprivation (expropriation) may also occur as a result of a state’s interference in the use of the property or the receipt of its benefits by the investor, even though legal title to the property has not been affected. The assumption of control over property by a government does not automatically constitute expropriation requiring compensation under international law, however, a claim of expropriation is warranted whenever events demonstrate that the owner has been deprived of fundamental rights of ownership and it appears that this deprivation is not temporary. This is usually referred to as indirect expropriation and is often described as “equivalent”,

¹⁴¹ *ibid*, p. 321-322

¹⁴² *ibid*, p. 324

“tantamount”, “*de facto*”, “creeping”, “constructive”, “disguised”, “consequential”, “regulatory” or “virtual expropriation”.¹⁴³

What is ‘prompt, adequate and effective compensation’ for expropriation in customary international law is usually the issue most hotly disputed by the claimant and the respondent. The country expropriating the assets would prefer to pay an amount equivalent to the book value of the investment, that is, the difference between the project’s total assets and its total liabilities (total assets – total liabilities = book value) based on historical cost. The company being expropriated, however, usually seeks compensation measured by the market value of the investment prior to expropriation. The market value of the property is usually the higher of the two values and the difference between them is frequently substantial. This is particularly true in the oil and gas industry in which the value of successful wells exceeds their cost; and the market value of reserves tends to increase, because oil and natural gas prices have tended to increase.

The decisions of most international courts and tribunals and scholarly writing support the position that under customary international law the country expropriating the assets is required to pay full compensation measured by the *fair market value* of the property that has been taken”.¹⁴⁴ Even those bilateral investment treaties which expressly define equitable compensation as the *fair market value*, the specific language used in the agreement can have a significant effect on the amount of the compensation.

For example, in an arbitration case between the Airport Development Co. and the Republic of Hungary, the bilateral investment treaty stated that “the amount of compensation must correspond to the market value of the expropriated investments at the moment of the expropriation” and that “the amount of this compensation may be estimated according to the laws and regulations of the country where the expropriation is made”. A provision written in this manner would be particularly unfavorable to a company whose asset values have been driven down by acts of the host government prior to the announcement of the expropriation, for example, raising tax or royalty rates, denying license renewals or right of transit.¹⁴⁵

¹⁴³ Ibid, p. 327

¹⁴⁴ Ibid, p. 378

¹⁴⁵ Neil Popovic and Alex Lathrop, “Recovery tactics outlined for foreign takeover losses,” *Oil & Gas Journal*

Legal Instruments Referenced in a Dispute

Fifty-one of the 68 oil and gas cases discussed previously and brought before an international court or tribunal had either been arbitrated or were being arbitrated pursuant to a bilateral investment treaty between the host country and the home country of the investor, nine were being arbitrated pursuant to the Energy Charter Treaty (ECT), three pursuant to the provisions of the North Atlantic Free Trade Agreement (NAFTA), two pursuant to both a bilateral investment treaty and the ECT. The legal document to which three were pursuant was unknown. Bilateral treaties are the legal instrument most often referenced in the adjudication of contract disputes brought before an international tribunal.

Length of Time in Arbitration

The ten cases related to oil and gas exploration and production brought before an international court or tribunal between 1996 and 2002, have been resolved through an arbitration decision or by the parties reaching an out of court settlement. Fifteen of the 58 cases brought before an international court or tribunal between 2003 and 2012 were settled, but 40 were still pending. The status of three cases was unknown. This again suggests that seeking compensation in an international court or tribunal is often a slow process. The next section examines the relationship between the number of disputes, the number of bilateral treaties, and the reliability of the legal system in a country.

6.5 – Bilateral Investment Treaties, Legal Systems and Disputes (Question #5)

In section 6.2, it was observed that most disagreements between the parties to a contract are resolved by the parties themselves, but in section 6.4 it was observed that when a disagreement cannot be resolved by the parties, the legal instrument most often referenced in the legal proceedings is the bilateral investment treaty between the country of the claimant and the country of the respondent.

Are countries that have signed a large number of bilateral investment treaties less likely to be involved in disputes in an international court or tribunal? The rationale for this proposition is that countries that have signed a large number of bilateral investment agreements may have a

greater respect for the agreements they sign and the rule of law in general. Another way to evaluate this relationship is to directly compare the quality and reliability of a country's legal system and the number of claims that have been brought against it in an international court or tribunal. The rationale for this proposition is that a country with a fairer and more reliable legal system is less likely to be involved in disputes before an international court or tribunal because both parties to the contract are likely to have confidence in the domestic court system.

Q₅

(1) Are countries that have signed a large number of bilateral investment treaties less likely to be involved in disputes in an international court or tribunal?

(2) Are countries with more reliable legal systems less likely to be involved in disputes in an international court or tribunal?

H₅

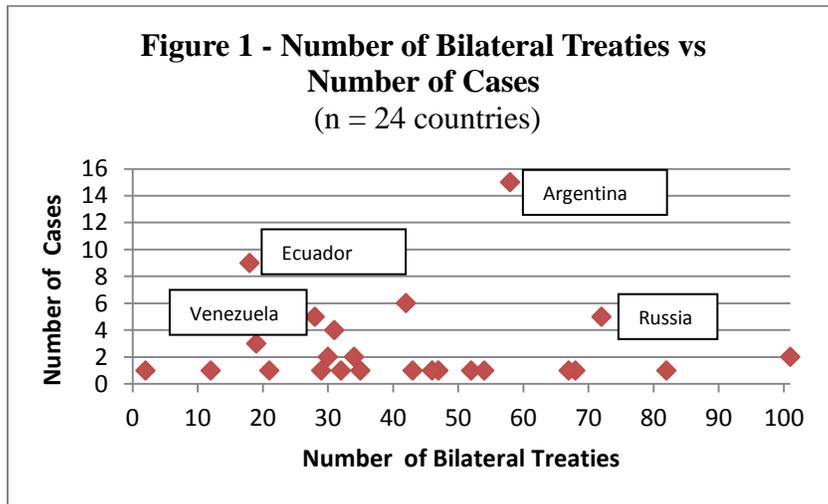
(1) Countries that have signed a large number of bilateral investment treaties are less likely to be involved in disputes in an international court or tribunal?

(2) Countries with more reliable legal systems are less likely to be involved in disputes in an international court or tribunal?

Number of Bilateral Treaties and the Number of Disputes

In Figure 1 below, Argentina (far right) has signed 58 bilateral investment treaties and had 15 cases brought against it by companies in the oil and gas industry. The Russian Federation has signed 72 bilateral investment treaties and had 5 cases brought against it; Ecuador has signed 18 bilateral investment treaties and had 9 cases brought against it; and Venezuela has signed 28 bilateral treaties and had 5 cases brought against it. In addition, there are 14 countries that were involved in one case, yet the number of bilateral treaties they had signed ranged from 2 to 82. Figure 1 indicates that the number of bilateral treaties a country has signed is not a reliable predictor of how many cases will be brought against it in an international court or tribunal. (R^2 is .0003 and adjusted R^2 is -.0452) Possible explanations for this include: (1) in a particular country, one regime may sign a large number of bilateral investment treaties to attract direct foreign investment and a subsequent regime may place more emphasis on wealth redistribution and resource nationalism. So that the large number of treaties a country has signed becomes an institutional artifact of the previous regime, but have no connection to the policy of the current regime, for example, Venezuela (28 BITs), Argentina (58), Chile (51), Cuba (59), Iran (61) and the Russian Federation (72); and (2) in some countries the decision to sign a large number of

bilateral investment treaties may be based more on political considerations than economic considerations, that is, signing treaties expands a country’s political network and in the case of larger countries its “sphere of influence”, for example China (130 BITs), Egypt (101), France (102), Germany (134), India (84), Italy (92), South Korea (90), Netherlands (93), Spain (82), Switzerland (118), Turkey (88), United Kingdom (104).

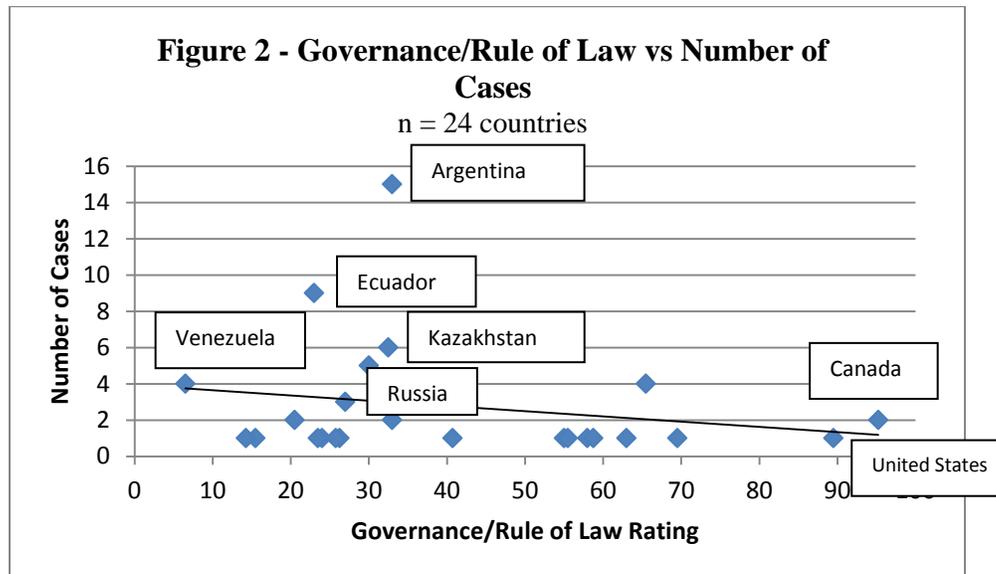


Quality of Legal Systems and the Number of Disputes

Figure 2 below, compares the number of cases brought against a country in an international court or tribunal and the composite rating (average) a country received on the quality and reliability of its legal system based on government effectiveness, regulatory quality, rule of law, and the control of corruption. Zero is the worst possible rating and 100 is the best possible rating.

Argentina has a composite rating of 33 and had 15 cases brought against it in an international court or tribunal. Ecuador has a rating of 23 and had 9 cases brought against it. Kazakhstan has a rating of 33 and had 6 cases brought against it. The Russian Federation has a rating of 30 and had 5 cases brought against it. Conversely, Canada has a rating of 95 and has been involved in two cases; and the United States has a rating of 90 and has been involved in one case. However, there are a significant number of countries in this sample with relatively low composite ratings and yet only one case brought against them (lower left quadrant). These include Nigeria, Tajikistan, Azerbaijan, Algeria and Albania. Another way of looking at this is to note that Canada has a composite rating of 95 and had two cases brought against it and Venezuela has a composite rating of just 7, but had only four cases brought against it. Figure 2 indicates that the

composite rating a country received on the quality of its governance and legal system is not a reliable predictor of the number of cases brought against it. (R^2 is .0512 and adjusted R^2 is .008).



The next section evaluates whether there is a relationship between the number of bilateral investment treaties a country has signed and oil consumption and foreign direct investment outflows and inflows. It also evaluates the effectiveness of international courts and tribunals.

6.6 - Oil Consumption, Foreign Direct Investment and Bilateral Investment Treaties (Question #6)

Q_6

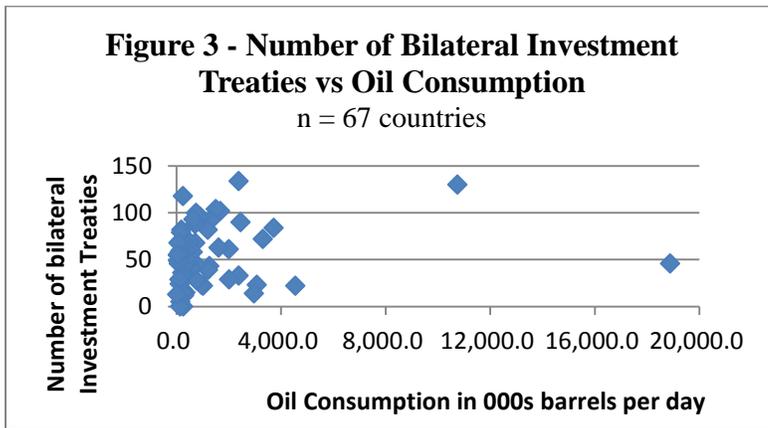
- (1) Does a relationship exist between the amount of oil a country consumes and the number of bilateral treaties it has signed?
- (2) Does a relationship exist between the foreign direct investment (FDI) outflows from a country and the number of bilateral investment treaties it has signed?
- (3) Does a relationship exist between the foreign direct investment (FDI) inflows to a country and the number of bilateral investment treaties it has signed?
- (4) Are the rulings of most courts and tribunals fair and are they complied with.

H_6

- (1) There is no relationship between the amount of oil a country consumes and the number of bilateral treaties it has signed.
- (2) There is a relationship between the FDI outflows from a country and the number of bilateral investment treaties it has signed.
- (3) There is a relationship between the FDI inflows to a country and the number of bilateral treaties it has signed
- (4) The rulings of most courts and tribunal are fair and are complied with.

Oil Consumption and Bilateral Investment Treaties

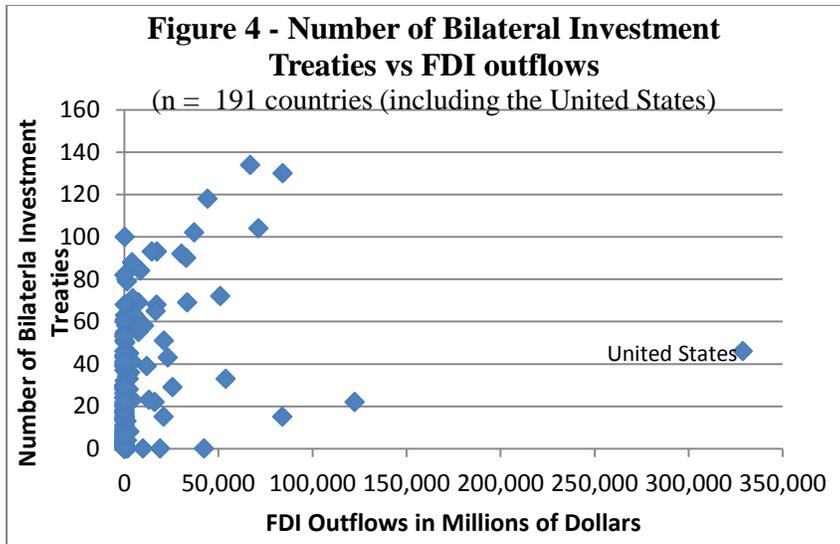
Figure 3 below, suggests that there is no observable relationship between the amount of oil a country consumes and the number of bilateral investment treaties it has signed. However, a statistical analysis of the data *might* show that a country’s oil consumption is statistically and substantively significant, even though it may be only one of several variables determining the number of bilateral treaties a country has signed.



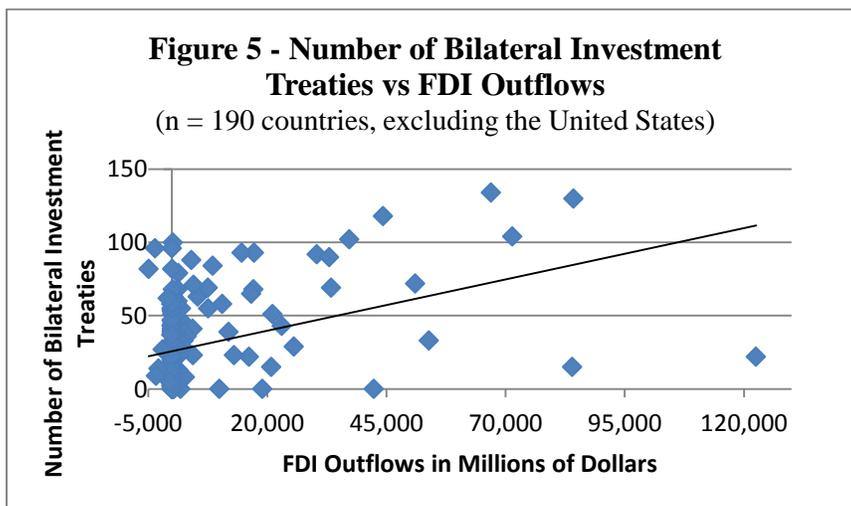
This analysis could also be refined by comparing the amount of oil a country imports from the countries that are its principal oil suppliers and the number of bilateral investment treaties it has signed with those countries. However, if the oil imported is simply purchased, but not the result of direct foreign investment made by investors from the oil importing country in the oil exporting country, it is unlikely that there would be a strong relationship between the amount of oil imported and the number of bilateral investment treaties the oil importing country has signed.

Foreign Direct Investment Outflows and Bilateral Investment Treaties

Figures 4 and 5 below compare the number of bilateral investment treaties a country has signed and the dollar amount of the foreign direct investment made by that country. Figure 4 shows that the United States is an “outlier” and would therefore distort a regression line fitted to the data.

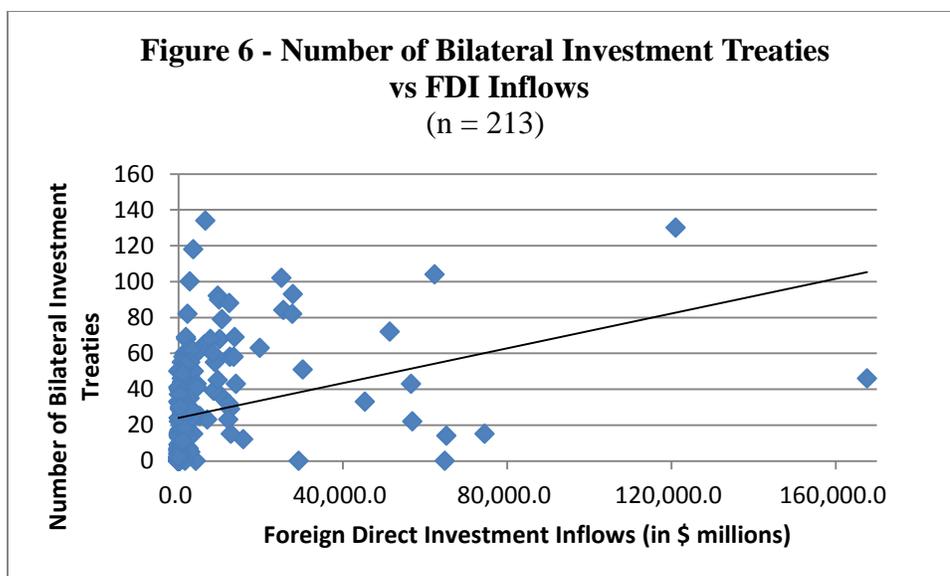


In Figure 5, the United States is excluded. When the United States is excluded, the existence of a relationship between the number of bilateral treaties a country has signed and FDI outflows appears more likely but the large number of countries clustered on the left side of the figure suggests that other factors are also affecting the amount of FDI outflow from a country. For example, many countries are too small to have significant outward foreign direct investment no matter how many bilateral investment treaties they sign.



Foreign Direct Investment Inflows and Bilateral Investment Treaties

Figure 6 suggests the number of bilateral investment treaties a country signs is related to the foreign direct investment inflows a country receives, but the other factors are also involved.



This is consistent with the literature on this issue. For example, Hallward – Driemeier concluded that bilateral investment treaties act more as complements than as substitutes for good institutional quality and local property rights.¹⁴⁶ However, Neumayer and Spess conclude that a higher number of BIT's increases the FDI inflows to a developing country.¹⁴⁷

Fairness and Effectiveness of International Courts and Tribunals

Given the general proposition that institutions develop and are sustained because they reduce risk and expand the range of economic possibilities, it is reasonable to think that international courts and tribunals are at least marginally effective, otherwise there would be little reason for them to exist. The question then is not whether they are effective, but how effective they are.

Table A.7 in Appendix III shows that of the 68 oil and gas cases in the UNCTAD database, 16 have been resolved by a court or tribunal, (8 in favor of the plaintiff and 8 in favor of the defendant.) These sixteen cases are not sufficient to conclude that international courts and tribunals are mostly impartial, but the fact that court or tribunal decided in favor of the plaintiff as often as they decided in favor of the defendant is encouraging. Ten cases have been settled out of court, thirty-eight cases are still pending and the disposition of four cases is unknown.

¹⁴⁶ Mary Hallward-Driemeier, "Do Bilateral Investment Treaties Attract FDI? Only a bit...and they could bite," World Bank, DECRG, 2003, <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-3121>

¹⁴⁷ Eric Neumayer and Laura Spess, "Do Bilateral Treaties Increase FDI to Developing Countries," London LSE Research Online, 2005, [http://eprints.lse.ac.uk/627/1/World_Dev_\(BITs\).pdf](http://eprints.lse.ac.uk/627/1/World_Dev_(BITs).pdf)

Claims Amounts versus Award Amounts

In six of the eight cases decided in favor of the investors, the investors were awarded an amount less than they requested; in one case the investors were awarded exactly what they requested; and in one case the amount requested is not known, but the amount awarded is known. In six of the eight cases that were decided in favor of the state, the investors were awarded less than they requested; in one case only part of the award was made public and in one case the court ruled that it did not have jurisdiction. Therefore, in 12 of the 16 cases, the claimant was awarded less than the amount they requested. This is in part because claimants usually seek compensation equal to the market value of the assets expropriated or the market value of the breach of contract, not the book value, which is usually lower. The conflict between book value and market value is discussed in more detail later.

Efficiency of International Courts and Tribunals

One measure of the efficiency of international courts and tribunals is the time elapsed from initiation of the case to the date the court or tribunal rendered its decision. Of the 16 cases in which a decision has been rendered, 2 cases were in arbitration for 6 years, 3 cases for 5 years, 3 cases for 4 years, 4 cases for 3 years, 3 cases for 2 years and 1 case for 1 year. The average time for a decision from an international court or tribunal was 3.6 years. Of the ten cases that were settled out of court, 1 was settled in 7 years, 1 was settled in 4 years, 3 were settled in 2 years, and 5 were settled in 1 year or less. The average time to settlement was 2.2 years.

Of the thirty-eight cases that are still pending resolution, 2 have been pending for 2 years, 3 cases have been pending for 3 years, 4 cases for 4 years, 2 cases for 5 years, 6 cases for 6 years, 4 cases for 7 years, 5 cases for 8 years, 5 cases for 9 years, 3 cases for 10 years, 4 cases for 11 years and the disposition of four cases is unknown. The average time in adjudication for those cases still pending is 6.9 years. A senior official at the ICSID explained this variation by noting that some cases are more complicated than others; some arbitrators are busier than others; and some parties challenge every motion and others only challenge basic and critical motions.¹⁴⁸

¹⁴⁸ ICSID, Telephone Interview with Senior Official at ICSID on September 23, 2014

Effectiveness of International Courts and Tribunals

After an ICSID tribunal renders its decision, the ICSID gives the claimant an official copy of the tribunal's findings and award in writing. The claimant then presents this copy to the defendant and requests compliance with the award. The timeliness and degree of compliance with court or tribunal's awards is difficult to evaluate because the compliance process is less transparent than the arbitration process and UNCTAD's and the ICSID's record of the procedural details of a case ends with the announcement of the award. A search of the literature did not produce any data on the timeliness and degree of compliance with court or tribunal awards. The only references found in the news media to non-compliance were Venezuela's rejection of the ICSID's award in favor of ExxonMobil; and Venezuela's subsequent withdrawal from the ICSID (see Case #5) and the Russia's rejection of the award granted by the Permanent Court of Arbitration to the previous shareholders in OAO Yukos. However, a senior official at the ICSID noted that there is an industry consensus that approximately 90% of awards are complied with.¹⁴⁹ The next section describes and evaluates the sources of capital, financing structures, business structures and alliances.

6.7 – Financing, Fiscal Regimes and Alliances (Question #7)

Sections 3.3 (Organizations in Practice), 3.3.1 (National Governments), 3.3.2 (National Oil Companies) and 3.3.3 (International Oil Companies) discussed three types of organizations that comprise the international oil and gas industry. This section examines the options available to these organizations regarding sources of capital, financing structures, fiscal regimes and alliances.

Q₇

- (1) What sources of capital are available to finance oil and gas exploration and development?*
- (2) What financing structures are available?*
- (3) What fiscal regimes are available?*
- (4) Do alliances offer any advantages in managing risk; and how politically feasible are they?*

H₇

- (1) Commercial bank debt, bonds and common stock remain the dominant forms of financing in the oil and natural gas industry. Master limited partnerships, venture capital and multilateral financing play a smaller role.*
- (2) Joint ventures and project financing can redistribute risk, but they do not necessarily reduce overall risk.*

¹⁴⁹ Ibid

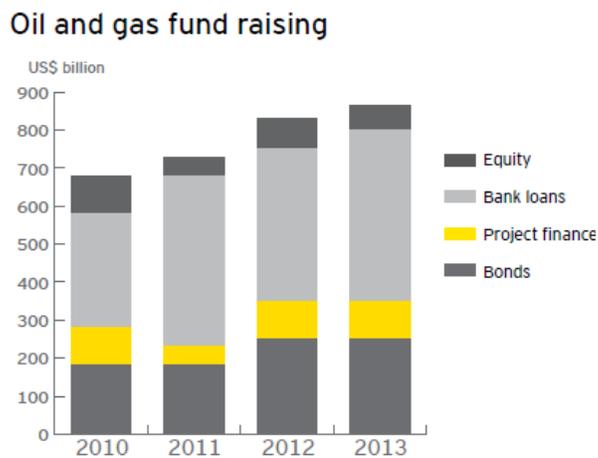
(3) *Fiscal regimes (tax/royalty agreements, production sharing agreements, and service agreements) are an important method for allocating risk and reward.*

(4) *Alliances offer some advantages, but are constrained by political uncertainty and conflict over the life such an alliance.*

6.7.1 Sources of Financing

In 2013, capital expenditures and exploration expense (CAPEX) in the oil and gas industry were \$682 billion and is expected to reach \$723 billion in 2014.¹⁵⁰ Figure 7 below, presents an estimate of the funds (financial capital), raised by oil and gas exploration companies and the source of those funds between 2010 and 2013. Two observations are worth noting: (1) the amount of funds raised in 2013 was approximately \$850 billion and the amount of CAPEX (not shown) was \$682 billion in 2013. This implies that the industry raised capital in 2013 in anticipation of even higher capital expenditures in 2014; (2) there is no explicit mention of internally generated cash flow from operations in this chart. Net cash flow from operations would therefore need to be added to these figures to estimate the total sources of financial capital. Nevertheless, Figure 7 provides a first approximation of the relative importance of various sources of financing.

Figure 7¹⁵¹



Source: ThomsonONE

¹⁵⁰ Barclays, "Global 2014 E&P Spending Outlook," December 9, 2013, <http://www.pennenergy.com/content/dam/Pennenergy/online-articles/2013/December/Global%202014%20EP%20Spending%20Outlook.pdf>

¹⁵¹ E&Y, "Funding Challenges in the Oil and Gas Sector, Innovative Financing Solutions for the Oil and Gas Sector," [http://www.ey.com/Publication/vwLUAssets/EY-Funding-challenges-in-the-oil-and-gas-sector/\\$File/EY-Funding-challenges-in-the-oil-and-gas-sector.pdf](http://www.ey.com/Publication/vwLUAssets/EY-Funding-challenges-in-the-oil-and-gas-sector/$File/EY-Funding-challenges-in-the-oil-and-gas-sector.pdf)

Equity Financing

Public Equity Investment

Companies can acquire capital and investors can make an equity investment in a company in two ways, publicly or privately. Public companies' shares are traded on a stock exchange and can be purchased by anyone, at any time. The IOCs and many of the major NOCs are traded publicly, either in New York, London, Tokyo, or Hong Kong. Many of the medium-sized companies and even the "juniors" in the oil and gas industry are also publicly traded.

Common Stock

Common stock gives its holders ownership in an oil and gas company that is proportional to the number of shares each common stockholder owns. Common stockholders also have a proportional claim on the net income of the firm after the obligations to all of the firm's suppliers and creditors have been met. In this sense, the common stockholders bear the ultimate risk of failure or success of the enterprise. In the United States, the net income of the company is taxed at the company level and any dividends that are paid to the stockholders are taxed again at the individual shareholder level.

Master Limited Partnerships (MLPs)

A Master Limited Partnership (MLP) is a limited partnership (or limited liability company) which units are publicly traded on a stock exchange. If it meets certain qualifications under U.S. tax law, the MLP is a pass-through entity and does not pay tax at the entity level; taxes are only paid at the individual partner level. Although not required by law, MLPs generally distribute all of their available net income. In addition, each limited partner may record his share of the MLP's depreciation on his tax return.¹⁵² The master limited partners bear the ultimate risk of failure or success of the enterprise.

The first MLP was created by Apache Oil Company in 1981. The number of MLPs in the oil, gas and real estate industries grew rapidly in the 1980s and the U.S. Congress and the IRS became concerned that large numbers of corporations would become MLPs to avoid the corporate income tax. To prevent the widespread adoption of the MLP form, in 1987 Congress

¹⁵² International Energy Forum, NOC-IOC Partnerships, General Guidelines for Successful Cooperation. Report for the 13th IEF Ministerial, Kuwait, March 12-14, 2012, Internal Revenue Service Code, I.R.C. § 7704 (2006)

passed legislation to define and limit publicly traded partnerships. Congress created Section 7704 of the Internal Revenue Service Code, limiting partnership tax treatment to publicly traded partnerships (PTPs) earning more than 90 percent of their income from a limited number of specific sources.¹⁵³

The popularity of MLPs continued to increase as investors searched for higher yield and energy companies sought to monetize the value of their assets and still maintain control. As of February 2013, there were approximately ninety-six energy MLPs, and market capitalization for all MLPs was approximately \$403 billion. Approximately 70% are midstream energy MLPs (pipelines and oil storage), 7% are upstream energy MLPs (exploration and production) and the remaining 23% are in other industry sectors.¹⁵⁴

Private Equity Investment

Private equity firms have existed since 1946, but they increased in size and number beginning in the early 1980s. Investors can make an investment in a privately owned company only if the existing owners agree to expand the ownership of the firm. The potential investors must reach an agreement with the current owners regarding the amount of capital they will contribute and the proportional ownership the new investors will have in the expanded firm. Private equity capital can come from individual private investors, institutional investors, mutual funds and sovereign wealth funds. Private equity investors frequently hold the investment until it has attained significant value and then sell the company to another investor group or take it public in an initial public offering (IPO).

Hundreds of small oil and gas firms rely on private equity capital to fund their operations. These firms often have significant potential, but have limited access to other forms of capital because they have little operating cash flow and few assets in the beginning, to present to a commercial bank as collateral for a loan. And although, advances in technology have improved the odds of finding oil and gas, success is still elusive; three-quarters of all exploration wells are “dry holes”, either because there is no oil there or because geologists have been unable to accurately identify

¹⁵³ National Association of Nationally Traded Partnerships, National Limited Partnerships 101: Understanding MLPs, October 4, 2013, http://www.naptp.org/documentlinks/Investor_Relations/MLP_101.pdf

¹⁵⁴ Dimitra Defotis, “The New MLP Landscape,” Barron’s, Feb. 23, 2013.

<http://online.barrons.com/news/articles/SB50001424052748704103204578314250446774898>

the location of the oil or natural gas.¹⁵⁵ However, ninety percent of the petroleum produced in North America is produced by independent producers, not IOCs. Many of them are private companies that rely on private equity investment to finance their operations.¹⁵⁶ Private equity groups made significant investments in the oil and gas industry in 2012 (1,590 private-equity backed deals valued at \$152.3 billion).¹⁵⁷

Venture Capital

Venture capital financing primarily supports the development of private sector company “startups” that have significant growth potential. The global oil and gas industry includes thousands of startup companies, but their access to venture capital has been limited. In the early 1980s, venture capital investments in the energy and industrial-energy field accounted for more than 20% of all venture capital financing, however by 2000, this percentage had declined to 1%. Between 2002 and 2008, interest in the energy sector among venture capital firms increased slightly to 3% of all venture capital investment in 2007. However, most of this investment was and still is, focused on clean technologies (biomass, algae, and CO₂ capture), not oil and gas exploration and development.¹⁵⁸

The oil and gas industry does not attract venture capital for two reasons. First, most new oil and gas technologies (e.g. hydraulic fracturing, horizontal drilling, and three dimensional seismic imaging) require large amounts of capital, often averaging more than \$100 million and ten or more years to reach commercialization and profitability.¹⁵⁹ Second, oil and gas industry technology is perceived as mature and therefore unlikely to produce significant technological innovation.¹⁶⁰

¹⁵⁵ Jad Mouawad, “Wildcatters find their niche in the oil industry,” *The New York Times*, May 19, 2007

¹⁵⁶ Oil & Gas Journal, “Private Equity Investments Crucial to Energy Industry,” O&GJ, December 1, 2009

¹⁵⁷ Taina Rosa, “Still not buying into a Buyout Boom,” *The Deal Pipeline*, Jan. 11, 2013, available at <http://pipeline.thedeal.com>.

¹⁵⁸ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 62

¹⁵⁹ Robert W. Shaw, Jr. “Energy Venture Capital: The New Wave,” Arete Corporation, in *Energy Venture Capital Best Practices* (Boston: Aspatore Books, Inside the Minds series, May 2006) p. 8

¹⁶⁰ Rolf Wustenhagen and Tarja Teppo, *What Makes a Good Industry for Venture Capitalists? Risk, Return, and Time as Factors Determining the Emergence of the European Energy VC Market* (University of St. Gallen, IWO Discussion Paper No. 114, October 2004)

Debt Financing

Debt financing is available in two forms, commercial bank loans and the issuance of bonds. The most common form of oil and gas financing is senior debt obtained from a bank, or a syndicate of banks, (see Figure 7 above) through a revolving credit facility or a term loan credit facility. (A revolving credit facility is a line of credit for which the customer pays a commitment fee and is then allowed to borrow money from the lender up to the agreed limit. It is usually used to fund ongoing operations; and the amount of the borrowing changes each month depending on the customer's current cash flow needs). If the loan is made to provide an oil and gas producer with working capital or funds to develop existing oil and gas properties, a revolving credit facility is used. However, if the loan is made for the purpose of purchasing oil and gas properties, a term loan facility is typically used.

Banks usually secure the loans with a mortgage or deed of trust on the oil and gas properties that are being acquired or developed using the proceeds of the loan. These mortgages or deeds of trust permit the bank to foreclose on the oil and gas properties in the event of a default by the borrower under the credit agreement. If it becomes necessary for the bank to foreclose on the borrower, the bank can sell the oil and gas properties and recover part of the funds it loaned.¹⁶¹

Most small and medium-sized firms in the oil and gas industry rely on commercial banks for short-term and medium-term loans to finance their operations, but the availability of long-term commercial bank loans and access to the bond market has historically been limited if these firms specialize exclusively in the exploration and production segment of the industry. In that case, these firms must rely on public and private equity for capital. In contrast, the super-majors (Chevron, ExxonMobil, ConocoPhillips, BP and Royal Dutch Shell) and other IOCs have continuous access to commercial bank loans and the bond market, because of their vertical integration; more diverse lines of business; diversity of their exploration and production projects; longer history of operation; and their overall size.

¹⁶¹ Jeffrey S. Munoz, "Financing of Oil and Gas Transactions," *Texas Journal of Oil, Gas and Energy Law*, Volume 4, No. 2 (2009), p. 223 - 267

Multilateral Financing

Commercial banks (loans) and investment banks (bonds) are the most common sources of debt financing however, there are other sources of debt financing that are particularly important to developing countries. Multilateral lending organizations include the International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), Energy Sector Management Assistance Program (ESMAP), Global Environment Facility (GEF) and the Carbon Finance Facility (CFF).

The World Bank has separated the agencies under its control (Table 3) that lend to public enterprises (government and semi-government organizations) from those that lend to private enterprises (for-profit enterprises). The International Bank for Reconstruction and Development (IBRD) and the International Development Agency (IDA) provide loans to public enterprises, and the International Financing Corporation (IFC) lends to private enterprises. There are also regional banks that support investment in the energy industry. These include the Inter-American Development Bank, the European Bank for Reconstruction and Development, and the African Development Bank.

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Table 3 - Multilateral Lending Organizations for the Oil and Natural Gas industry¹⁶²

International Bank Facilities	Founded	Primary Lending and Funding Activities
International Monetary Fund (IMF)	1944	Provides financial assistance to national governments to help them through serious periods of economic adjustment
International Bank for Reconstruction and Development (IBRD)	1944	Also referred to as the <i>World Bank</i> , it was founded to reconstruct post-War Europe, and now lends to governments worldwide to support economic and social development
International Development Association (IDA)	1960	Interest-free loans, credits to finance projects that reduce poverty
International Finance Corporation (IFC)	1956	Lends directly to private companies without governmental guarantees to promote private enterprise
Multilateral Investment Guarantee Agency (MIGA)	1988	Provides investment guarantees (currency, war, expropriation, breach of contract) to private companies investing in developing countries
Energy Sector Management Assistance Program (ESMAP)	1974	Provides advice and analysis but not funds for shaping energy sector development and policy (a JV of the United Nations and World Bank)
Global Environment Facility (GEF)	1991	Provides grants for studies and projects involving national and regional environmental benefits
Carbon Finance Facility	2004	Supports carbon reduction policies and programs in OECD and non-OECD countries which are aligned, using the World Bank Carbon Finance Unit (CFU) as structure and manager

Regional Development Bank Facilities

Inter-American Development Bank (IDB)	Asian Development Bank (ADB)
African Development Bank (AIDB)	European Union (EU)
European Bank for Reconstruction and Development (EBRD)	European Investment Bank (EIB)
Nordic Finance Group	Islamic Development Bank
OPEC Fund for International Development	Arab Fund for Economic & Social Development
Arab Bank for Economic Development in Africa (BADEA)	

Critics have argued that multilateral lending organizations are no longer necessary because of the depth and liquidity of the international financial markets. They also argue that they are highly politicized in their lending policies. Proponents of multilateral lending agencies argue that these institutions provide affordable capital for high value projects in high risk countries, projects that would not be financed at affordable interest rates by commercial banks.

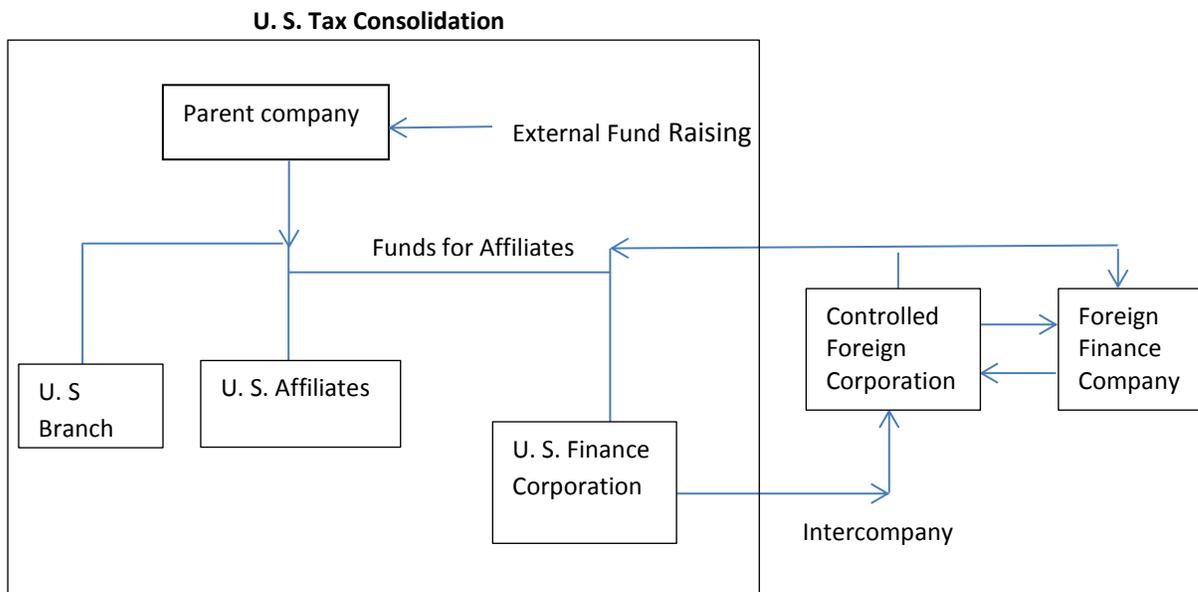
¹⁶² Hossein Razawi, *Financing Energy Projects in Developing Countries*, PennWell, 2007. Reproduced in Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011)

6.7.2 – Financing Structures

Centralized Finance System

The centralized finance system is the most common form of financing and ownership structure. It relies on a combination of equity (stock) and debt (commercial bank loans and bonds). In this approach, there is no separation of funds between general operations and the specific projects the company undertakes. When done correctly, it combines a strong central credit rating with a sophisticated intercompany financing system (and the occasional use of project financing) and provides large oil companies with several competitive advantages. These advantages include: low-cost debt and equity, efficient use of the company's cash flow, global tax optimization, and facilitates remittance of its foreign affiliate's cash.

Figure 8 - Typical Centralized Finance System



Source: Adapted from Stephen Arbogast and Praveen Kumar, *Financing Large Energy Projects*, Chapter 13, in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013)

However, financing a project entirely using one company's financial resources is not always feasible or prudent, because an individual project may require more capital than one company can afford to risk on a single project. In that case, another financing structure is needed to allocate the risk. These structures include joint ventures and project finance.

Joint Ventures

A joint venture (JV) is a financing arrangement in which two or more parties agree to pool their financial resources for the purpose of accomplishing a specific objective. In a joint venture, both of the participants are responsible for the costs incurred and the profits and losses associated with it. The joint venture is a separate legal entity from the parent companies that are funding the venture. A separate operating agreement is prepared which specifies which company or companies are responsible for actual project development and operation. By jointly funding the enterprise, two or more companies can share the risk associated with a specific project and achieve greater diversification of risk by investing in a larger number of projects.

Project Finance

IOCs are attracted to large projects, located in difficult environments for two principal reasons. First, large projects provide IOCs the opportunity to use their advanced technology and project management skills as a source of competitive advantage. Second, most NOCs have exclusive access to drilling prospects in their country, particularly onshore. Consequently, the IOCs are forced to operate large projects in difficult environments.

Because of the large size and technical complexity of these projects, IOCs have often chosen to finance these projects using project financing. In this type of financing structure, the project is financed primarily with commercial bank debt, usually 60% or more. Project financing legally separates the project and its funding from the rest of the corporation or corporations that are sponsoring the project. In a project finance arrangement the lenders rely solely on the assets and cash flow of the project for the repayment of principal and interest. This is significantly different from the centralized corporate finance model, in which lenders rely on the cash flow and financial strength of the entire corporate enterprise for repayment of principal and interest.

Many project finance arrangements in the petroleum industry are structured through a *special purpose entity* (SPE), an off-balance-sheet partnership set up by the company to separate the financial risk of the project from the rest of the corporation. However, it was this type of off-balance sheet financing structure that contributed to the collapse of Enron Corporation. As a consequence, internal and external auditors (compliance institutions) are examining these SPEs

in more detail and asking for evidence that they serve some business purpose other than to keep debt off the parent company's balance sheet.

Debt levels of 60% or higher place a considerable burden on the cash flow from the project for the payment of principal and interest. For the commercial bank or syndicate of banks that provide this capital to be comfortable with the risk they are assuming, the project financing agreement usually contains the following provisions.¹⁶³

- The project is established as a new legal entity, separate from the legal and financial responsibilities of its sponsors. This creates a defined environment within which lenders (commercial banks) can evaluate the risks associated with a specific project and guarantees that the project's cash flow will be used exclusively to repay the principal and interest on the debt of that particular project. Project financing also protects the sponsor's other assets which are not a part of the project.
- Projects should be long-lived and capital intensive; and they should have a unique purpose. Oil and natural gas pipelines are particularly well suited to this type of financing.
- The project should include cash flow from third-party commitments (customers) that are predictable and reliable. This is usually accomplished through the establishment of commitments by third parties to "take or pay" for the output from the project. These third party agreements are usually long term sales contracts that include price adjustment clauses based on inflation.
- The project should have a finite life, at the end of which, all debt and equity will have been repaid.

The use of project financing for high-risk infrastructure construction began with the development of the North Sea oil fields in the 1970s and 1980s. Projects of this type and size were previously financed by issuing utility or government bonds; and within the framework of a centralized

¹⁶³ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011)

finance system. Examples of project finance include major LNG projects such as the Qatar Gas II project (2009), as well as many of the largest individual pipeline investments undertaken in the past three decades, such as the Trans-Alaska Pipeline (1977), Chad - Cameroon Pipeline (2003), and the Baku - Tbilisi - Ceyhan Pipeline (2005). These projects often combine project financing and equity joint ventures. For example, the Trans-Alaska Pipeline was a project finance joint venture between Standard Oil of Ohio, Atlantic Richfield, Exxon, British Petroleum, Mobil Oil, Phillips Petroleum, Union Oil, and Amerada Hess.¹⁶⁴

Structured Project Financing

Structured financing is a more refined approach to project financing. Structured finance involves raising capital and managing risk through the issuance of securities designed to meet the specific risk and reward requirements of a particular type of investor. Structured project finance combines specific securities and derivatives with standard project financing.¹⁶⁵

Structured project financing reduces the transaction costs created by information asymmetries, by limiting the risks a particular group of investors assumes to those that the investors feel comfortable evaluating. (Information asymmetries exist when investors in a firm's securities do not have the same information or the same level of understanding of the project's risk as the firm's managers, which, is usually the case.) Structured project finance also helps the project sponsors and investors ensure that the various types of project risk are allocated to those participants most able and willing to bear them, which increases transaction efficiency and reduces the cost of capital.¹⁶⁶

Project finance structures can also solve remittance problems. This is particularly relevant to oil and gas export projects located in countries with unpredictable monetary policy. Loans for these ventures typically establish *offshore accounts* and *cash waterfalls*. Offshore accounts refer to bank accounts set up in a secure banking center (e.g., New York or London) to which all export customers are instructed to direct their payments. Cash waterfalls refer to written, irrevocable instructions to the bank describing how cash that has been received, is to be paid out to suppliers, short term creditors, long term creditors and others. Payments are usually made to suppliers first,

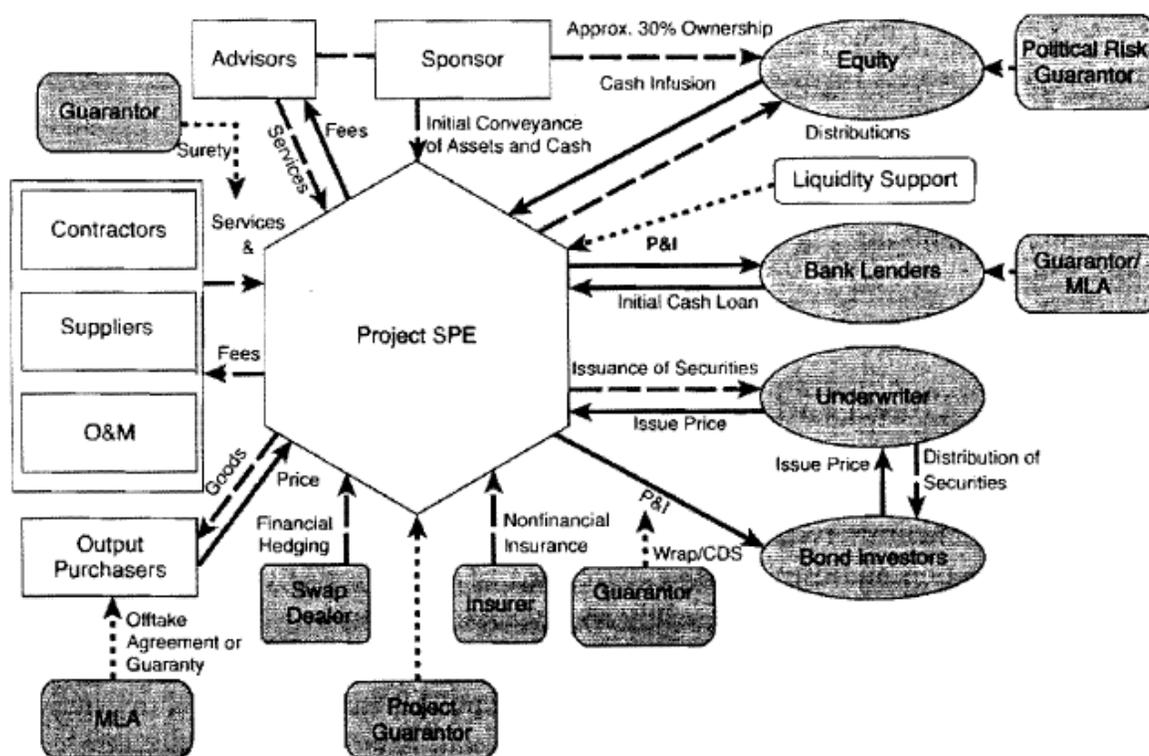
¹⁶⁴ Ibid

¹⁶⁵ Ibid

¹⁶⁶ Ibid

then taxing authorities, short term lenders and long term lenders. What matters for sponsors, however, is that the project's revenues are kept in a hard currency and in a country with a stable monetary policy, reducing the risk of inconvertibility or devaluation.¹⁶⁷ Figure 9 below shows a typical project finance structure.

Figure 9 - Typical Project Finance Structure



Source: Christopher L. Culp and Paul Forrester, *Structured Financing Techniques in Oil and Gas Project Finance*, Chapter 21, in *Energy and Environmental Finance Law and Taxation: New Investment Techniques*, editors Andrea S. Kramer and Peter C. Fusaro (New York: Oxford University Press, 2010)

This section examined financing sources and financing structures. The next section examines the evolution of fiscal regimes and their effect on the distribution of risk.

6.7.3 Fiscal Regimes

There are three fiscal regimes for controlling assets and the distribution of revenue in the oil and natural gas exploration and production sector: (1) concession or lease agreement (sometimes

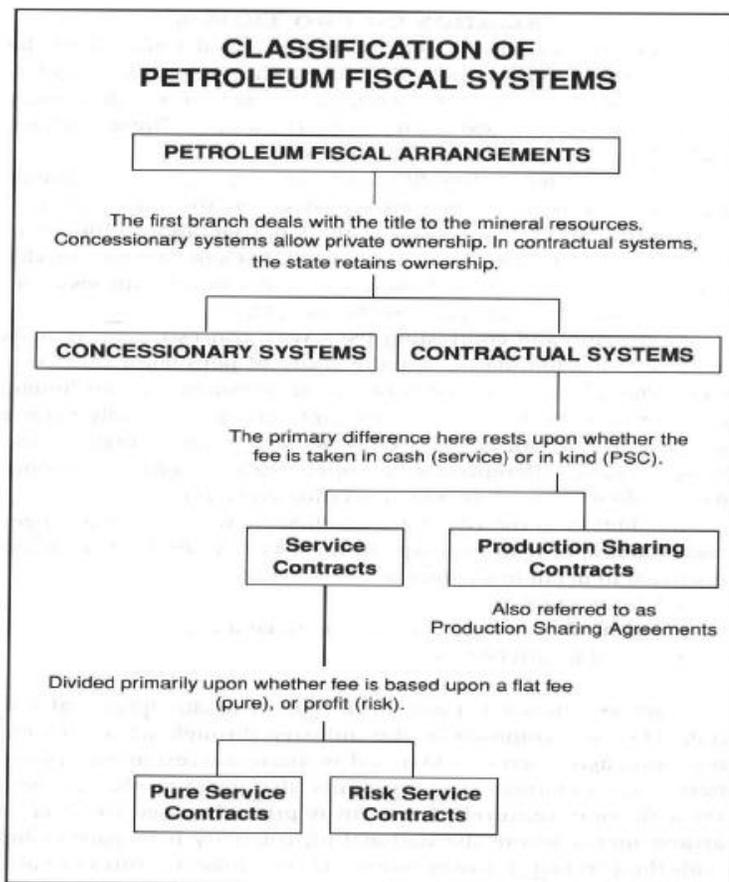
¹⁶⁷ Stephen Arbogast and Praveen Kumar, *Financing Large Energy Projects*, Chapter 13, in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013)

referred to as royalty/tax agreement); (2) a production sharing agreement or production sharing contract; and (3) a service contract. When a host country proposes a fiscal regime it must balance two competing objectives. First, if the host country wants to encourage investment by international oil and gas exploration companies (IOCs), it must provide sufficient incentives for oil companies to invest in the country and sufficient opportunity for the companies to recover their costs and earn an appropriate return on investment. Second, the state must balance the interests of the oil companies with the interests of its own citizens and its export customers.¹⁶⁸

Overview of Fiscal Regimes

Figure 10 below, summarizes the principal features of the three fiscal regimes mentioned above.

Figure 10



Source: Yi, Junseog, Merits and the Demerits of the Different Types of Petroleum Contracts, <https://www.google.com/#q=merits+and+demerits+of+the+different+types+of+petroleum+contracts>

¹⁶⁸ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. Chapter 6 (Tulsa, OK: PennWell Corporation, 2011) page 217

Concession or Lease (Royalty/Tax Agreements)

In a concession or lease agreement the IOC takes ownership of the hydrocarbons at the wellhead. (The wellhead is the component at the surface of an oil or gas well that provides the structural and pressure-controlling interface for the drilling and production equipment.) The IOCs' return on investment is obtained from producing and selling the oil and natural gas; and the state's financial returns are derived from royalty payments and taxes paid by the IOC. Royalties are usually calculated as a percentage of the projects revenues and is a more stable source of revenue for the host government than revenue based on the project's profit or loss. For example income taxes or dividend distributions will only be paid if the project or projects are operating at a profit. Although the royalties paid to the host government will also vary with the price of oil, royalties will provide income to the state every quarter, whereas as revenue derived from taxing the net income of the IOC on that project will vary more and could be zero if the project is not profitable in a particular quarter.¹⁶⁹ (See Figure A.3 in Appendix IV for an example of the revenue split.)

Contractual Systems

The unfavorable terms received by host governments in concession agreements (royalty/tax agreements) in the 1920s and 1930s led host governments and NOCs to develop so called "contractual systems". The two most commonly used contractual systems are the production sharing agreement (PSA) and the risk service contract. In a contractual system the state retains ownership of the oil and gas beyond the wellhead. The IOC only takes ownership of oil and gas allocated for recovery of exploration and development costs and allocated from the profit split of volumes for distribution and sale.¹⁷⁰

Production Sharing Agreements/Production Sharing Contract (PSA/PSC)

Under the terms of a PSA, the IOC is completely responsible for the development of the oil and natural gas. This includes all aspects of extracting the oil and gas and delivering it to a location for transportation and sale. In most PSAs, the state receives revenue from three primary sources: (1) royalties, (2) taxes, and (3) a share of the oil and gas produced.

¹⁶⁹ Ibid, page 222

¹⁷⁰ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance. Chapter 6* (Tulsa, OK: PennWell Corporation, 2011) page 223

When PSAs were first introduced in Indonesia in 1960, the IOCs were not enthusiastic. The prospect of investing large amounts of capital in exploration, equipment, and development, but not holding title to the oil and natural gas was unsettling for most IOCs. The introduction of PSAs was a major change to the structure of the industry and evidence that the bargaining strength of host governments was increasing and the bargaining strength of IOCs was decreasing. The resistance of the major oil companies to PSAs was overcome when several smaller independent companies without established concession agreements and operations in these oil producing countries, began signing PSAs to gain access to oil and natural gas prospects from which they had previously been shut out.¹⁷¹ (See Figure A.4 in Appendix IV for an example of the revenue split in a PSA, also called a PSC.)

Pure Service and Risk Service Contracts

In a pure service contract or risk service contract the IOC provides some or all of the financial capital for exploration and development and is paid by the host government according to a fixed price contract. In a “pure” service contract the IOC’s or service company’s revenue is based on the activities it performs, similar to a fixed price construction contract.¹⁷² The Argentine *Fronidizi* contracts of the late 1950s are examples of “pure” service contracts, named for Argentina’s President, at the time, Arturo Frondizi. IOCs were required to drill a specific number of wells per year per exploration block and in exchange received a fixed dollar amount based on a variety of metrics, including meters drilled, wells completed, and ultimately the oil and gas produced per hour.

Under a risk service contract, if the IOC finds oil or gas, the host country government allows the IOC to recover its costs by selling the oil and natural gas, however the IOC explores for oil and gas at its own risk and expense.¹⁷³ If no oil or gas is found, the IOC bears the cost. The choice of the fiscal regime (concession/lease, production sharing agreement, pure service contract or risk service contract) determines the allocation of risk and reward between the parties.

¹⁷¹ Ibid, page 225

¹⁷² Ibid, page 226

¹⁷³ Ibid, page 226

6.7.4 - Alliances

IOC – NOC Alliances

The relationship between an IOC and an NOC is usually determined on a project-by-project basis, consequently neither party has any assurance of a broader or longer-term relationship. Some industry analysts have suggested that the interests of IOCs and NOCs would be better served if they formed alliances that extended beyond a single project.¹⁷⁴ They argue that NOCs and IOCs each have unique strengths and that they are complimentary. NOCs are in a position to manage resource and production controls in a manner that the host government perceives to be in the national interest. Furthermore, NOCs are the principal organizations in many developing countries for acquiring new technologies and transferring those technologies to other parts of the domestic economy.¹⁷⁵ Technology transfers can come from a variety of sources, including from other countries' NOCs and from oil field service companies, but technology transfers have most often come from the IOCs.¹⁷⁶ In addition, the IOCs possess substantial technical expertise, project management skills, and the ability to define and develop new products and new markets.¹⁷⁷ At the 12th Ministerial of the International Energy Forum, the same observations and recommendations were made.¹⁷⁸

The arguments for these long term alliances are not entirely convincing for several reasons. First, the benefits to be derived from combining the unique capabilities of the NOCs and IOCs can be realized whether they work together on a single project or several successive projects. Second, the typical oil or gas project extends over 10 to 30 years and therefore involves a long-term relationship in itself. Third, NOCs, IOCs and host governments have an incentive to diversify their investment risk among several partners rather than just one or two. Fourth, there are historical and political obstacles to a closer and longer term relationship between NOCs and

¹⁷⁴ Robert A. James, *Strategic Alliances between National and International Oil Companies*, Working paper #104, (Freeman Spogli Institute for International Studies, October, 2011) p. 9

¹⁷⁵ Ibid p. 12

¹⁷⁶ Peter A. Nolan & Mark C. Thurber, *On the State's Choice of Oil Company: Risk Management and the Frontier of the Petroleum Industry* (Stanford University PESD Working Paper No. 99, 2010), available at http://pesd.stanford.edu/publications/on_the_states_choice_of_oil_company_risk_management_and_the_frontier_of_the_petrolium_industry/.

¹⁷⁷ Robert A. James, *Strategic Alliances between National and International Oil Companies* (Working paper #104, Freeman Spogli Institute for International Studies, October, 2011) p. 12

¹⁷⁸ International Energy Forum, *NOC-IOC Partnerships, General guidelines for successful cooperation* (Report for the 13th IEF Ministerial, Kuwait, March 12-14, 2012)

IOCs, including the experience of colonialism, the one-sided nature of the first concession agreements, the potential for resource nationalism and the possibility of sudden political change in the host country. These challenges exist even in a single project and are compounded if the alliance includes several projects with the same partner.

NOC-NOC Alliances

An alliance between two NOCs may be a more feasible alternative to an IOC-NOC alliance if “consorting” with an IOC is politically unacceptable in the host country. An alliance between NOCs may also make sense in circumstances in which an IOC partner is either difficult to find, or the potential NOC partner is willing to agree to more favorable terms than the IOC. However, in an NOC-NOC alliance, some of the advantages that exist in an NOC-IOC alliance are lost, for example, the technical know-how and project management skills of the IOC. In addition, NOC-NOC alliances may be impeded by current or future political differences between the two countries.

6.8 Managing Commercial and Non-Commercial Risk (Question #8)

Q₈

- 1. What are the general classes of risk, after a project has begun operation?*
- 2. What instruments are available for managing commercial risk?*
- 3. What instruments are available for managing non-commercial risk?*

H₈

- (1) The general classes of financial risk, after a project has begun operation are commercial and non-commercial risk.*
- (2) The instruments for managing commercial risk are liability insurance and reinsurance.*
- (3) The instruments for managing non-commercial risk include derivatives, long term purchase agreements and political risk insurance. Oil and gas companies use derivatives and long term purchase agreements, but the oil and gas industry’s use of political risk insurance has not been significant.*

Commercial and Non-Commercial Risk

After a project is in commercial operation, it still faces several commercial and non-commercial risks. The commercial risks include: (1) a decrease in revenue as a result of an unexpected decline in product demand or an increase in aggregate product supply; (2) an unexpected increase in operating cost; (3) loss of revenue from business interruption or lack of business continuity; (4) property damage; (5) labor disputes and local labor management problems; and

(6) liability (workers' compensation, product liability, environmental liability and general liability). In addition, oil and gas companies operating onshore or offshore the United States are required to demonstrate that they have sufficient financial resources to pay for damages and the cost of cleanup created by an oil spill.

Non-Commercial risks can be divided into two broad categories (financial risk and political risk). The financial risks include changes in interest rates, exchange rates, commodity prices and inflation. Political risk includes: (1) asset impairment (degradation, destruction, and expropriation); (2) political violence and war; (3) insecure property rights (contract frustration or abrogation, patent violations, wrongful calling of guarantees, host country failure to honor guarantees and changes in host country laws) and (4) currency inconvertibility and capital flow restrictions.

Managing Commercial Risk

The risk of a decrease in revenue as a result of an unexpected decrease in product demand or an increase in aggregate product supply; and (2) unexpected increases in operating costs are generally not insured against. The oil and gas company's management is responsible for anticipating and adapting to changing economic conditions. Protection against loss of revenue from business interruption or lack of business continuity; labor disputes and local labor management problems and liability (workers' compensation, product liability, and environmental liability) are obtained through property and casualty insurance.

The purpose and operation of property and casualty insurance is generally understood but the purpose and operation of reinsurance is not as well understood. Reinsurance is the process by which an insurance company transfers a portion of its risk portfolio to other insurers by some form of legal agreement in order to reduce the risk that it bears for a specific project. The effect of reinsurance is to spread the risk of completion, operation and maintenance of a project across several insurance companies. In addition to re-insurance for traditional risks like liability, project completion, errors and omissions, and business interruption, re-insurers may also provide guaranties and sureties for contractors performance; provide financing guaranties and sureties for credit risk borne by the project (e.g., the risk of nonpayment from contractually committed purchasers of the oil and gas); and provide liquidity support to working capital.

Some of the larger private sector business property and casualty insurers include American International Group (AIG), the Chubb Group of Insurance Companies, and Travelers Group. Insurance companies providing property and casualty insurance to exploration and development companies drilling offshore include: Munich Reinsurance Co., Swiss Reinsurance Co. Ltd., Hannover Rueckversicherung AG, Chartis (a subsidiary of American International Group, Inc.), W. R. Berkley Corporation and Lancashire Group. In response to the Deepwater Horizon accident major insurance and reinsurance firms have increased the premiums they charge to firms operating drilling rigs in shallow water by 15% to 25% and for firms operating drilling rigs in deep water, as much as 50%.¹⁷⁹

Mutual Companies

In 1972, 16 oil companies formed Oil Insurance Limited (OIL). OIL is a mutual insurance company that has 50 members, all oil and gas companies. OIL only insures companies that meet its definition of an energy company. The company's All Risk Physical Damage insurance provides protection against damage to cargo, construction, terrorism, and windstorm. Its Control of Well Liability insurance provides protection against perils associated with drilling, for example blow-outs. Its 3rd Party Pollutions Liability products insure against liability (including punitive damages) or contractual liability of members for personal/bodily injury, loss of or damage to property arising from a seepage, pollution or contamination incident. (The company has a per project maximum of \$300 million for All Risk Physical Damage, \$300 million for Control of Well Liability, and \$300 million for 3rd Party Pollution Liability).¹⁸⁰

Environmental Liability Insurance

In the early 1960s, a specialty energy insurance market emerged to offer pollution liability coverage for third-party property claims and cleanup and contamination risks, oil well blowouts, and re-drilling.¹⁸¹ Insuring the liabilities of vessels was not made compulsory until the adoption

¹⁷⁹ Moody's Investor Service. "Deepwater Horizon Losses Hit Insurers and Reinsurers," Credit Global Research, June 30, 2010. https://www.moody.com/research/Moody-Deepwater-Horizon-Losses-Hit-Insurers-and-Reinsurers--PR_200382

¹⁸⁰ Oil Insurance Limited, <https://www.oil.bm/>

¹⁸¹ Rawle O. King. Liability and Financial Responsibility Issues Related to Offshore Oil Production, Senate Committee on Energy and Natural Resources, May 25, 2010, http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=cfe7ede3-9f52-03a2-6432-85f94c70d801

of the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC).¹⁸² At the same time, the offshore oil and gas insurance industry began offering insurance coverage for control of blowouts. Insurers subsequently expanded coverage to include the costs of drilling in deeper water and the cost of re-drilling if a blowout occurred.

In 1990, the United States, in response to the Exxon Valdez oil spill in Prince William Sound, passed the Oil Pollution and Control Act (OPA). The OPA liability and compensation framework includes a combination of elements that distribute the costs of an oil spill between the responsible party or parties and a trust fund, which is largely financed through a per-barrel tax on domestic and imported oil in the United States. Responsible parties are liable up to their liability caps which range from \$75 million to \$350 million depending on the nature of the spill; the Oil Spill Liability Trust Fund covers costs above the liability limits up to a per-incident cap of \$1 billion. However, if the cost of the spill exceeds \$1.350 billion, the liability above that amount lies with the party responsible for the accident (usually an IOC or one of its contractors). In the case of the Deepwater Horizon oil spill the responsible party was primarily BP.¹⁸³ The final report prepared by the National Commission on the *BP Deepwater Horizon Oil Spill and Offshore Drilling* highlighted a September 2010 announcement from the insurance company, Munich Re advertising environmental coverage in the \$10 billion to \$20 billion range.¹⁸⁴ However, this is the exception rather than the rule and there is no record of insurers underwriting policies of that size or oil companies being willing to pay the insurance premiums for coverage of that magnitude. Consequently, most exploration and production companies are self-insured for environmental liability, for example, BP in the Deepwater Horizon accident.

Managing Financial Risk

Financial risks include changes in interest rates, currency exchange rates, commodity prices, and inflation rates. Financial risks can be managed through a combination of derivatives and long term purchase agreements. Derivatives include commodity futures, forward contracts, options,

¹⁸² *International Convention on Civil Liability for Pollution Damage, 1969*, located at: [http://www.imo.org/conventions/contents.asp?doc_id=660&topic_id=256].

¹⁸³ Jonathan L. Ramseur, *Liability and Compensation Issues Raised by the 2010 Gulf Oil Spill* March 11, 2011, http://assets.opencrs.com/rpts/R41679_20110311.pdf

¹⁸⁴ Munich Re, Press Release, September 12, 2010, http://www.munichre.com/en/media_relations/press_releases/2010/2010_09_12_press_release.aspx

and swaps. Long term purchase agreements are usually negotiated prior to the development of an oil or gas field to secure a market for the future output from the field.

Managing Political Risk

Political risk includes: (1) asset impairment (degradation, destruction and expropriation); (2) currency inconvertibility and capital flow restrictions; (3) political violence and war; and (4) insecure property rights (contract frustration or abrogation, patent violations, wrongful calling of guarantees, host country failure to honor guarantees and changes in host country laws). Political risk insurance (PRI) provides one means of recovery for companies whose foreign investment has been expropriated or whose financial interests have been damaged by a host government or its citizens.¹⁸⁵ The first political risk insurance policies were issued by the United States after World War II to encourage private investment in Western Europe.

Private sector insurers also offer political risk insurance coverage in developing and developed countries and for various durations. Some of the larger private PRI issuers are Lloyd's of London; Zurich Financial Services Group; Sovereign Risk Insurance Ltd.; American International Group, Inc. (AIG); and Chubb Corp. In addition, the U.S. Overseas Private Investment Corporation (OPIC) and the Multilateral Investment Guarantee Agency (MIGA) also provide political risk insurance. Most government sector providers of PRI are national export credit agencies (ECAs), which insure short-term export credit/trade transactions. Examples include the U.S. Export/Import Bank (U.S.), Export Development Canada (Canada), and Eksport Kredit Fonde (Denmark).

Coverage Limits

OPIC and MIGA offer maximum coverage limits of \$250 million and \$220 million, respectively. The limits offered by private insurers range from \$85 million at AIG to \$125 million at Sovereign Risk Insurance Limited. However, political risk insurers often form consortiums to increase the total limits available to the policyholder and to diversify their own risk.¹⁸⁶

¹⁸⁵ Neil Popovic and Alex Lathrop, "Recovery tactics outlined for foreign takeover losses," Oil and Gas Journal 06/25/2007, <http://www.ogj.com/articles/print/volume-105/issue-24/general-interest/recovery-tactics-outlined-for-foreign-takeover-losses.html>

¹⁸⁶ Ibid

Overseas Private Investment Corporation

In 1971, the Overseas Private Investment Corporation (OPIC), a wholly owned U.S. government corporation, was established to provide direct financing and political risk insurance for projects in developing countries.¹⁸⁷ At the end of 2013, OPIC had a \$18 billion portfolio of which 71% was related to financing (i.e. loans), 12% to political risk insurance, and 17% to investment funds (i.e. equity investments).¹⁸⁸ The “loan limit” is \$250 million per project and the “house limit” for lending and insurance combined is \$400 million. OPIC provides protection against (1) war, civil strife, coups and other acts of politically-motivated violence; (2) terrorism; (3) expropriation, and (4) abrogation, repudiation and/or impairment of a contract or other improper host government interference. Companies can purchase protection against whatever risks they choose, that is, the insurance menu is “a la carte”. In addition, a company can purchase protection against “attenuated losses” or “trade related losses”, that is, losses created by a supply disruption between facilities on which its operations depend. A senior official at OPIC noted that regulatory risk and other types of “partial takings” are becoming more common than outright expropriation and that this type of event is harder to put a dollar value on.¹⁸⁹

This OPIC official also said that OPIC considers the existence of a bilateral investment treaty between the host country government and the country of the investor to be very important in its decision to insure a project. OPIC also places importance on a country’s signature and ratification of the New York Arbitration Convention (established in 1958) and a country’s membership in the ICSID

Dispute Resolution Procedures and Awards

The insurer usually waits until an international court or tribunal has rendered its decision and award, before it considers the plaintiff’s claim for compensation. While the case is still in arbitration, however, the insurer will try to get the parties to reach an out of court settlement. If the defendant pays the claimant after either the parties have agreed to a settlement or the court renders its decision and award, then the matter is ended. If the defendant does not pay the claimant, then the insurance company pays the claimant and the insurance company then seeks

¹⁸⁷ Ibid

¹⁸⁸ Overseas Private Investment Corporation, OPIC Annual Report 2013, , p. 2, http://www.opic.gov/sites/default/files/files/OPIC_AR2013_final.pdf

¹⁸⁹ OPIC, Telephone Interview with Senior Official at OPIC on September 24, 2014

payment from the defendant. A senior official at OPIC estimated that in the latter case OPIC recovers 95% of what it is owed by defendants. This official estimated that the recovery rate in the private sector of the PRI industry is about 35%. He explained the difference in recovery rates by noting that: (1) OPIC can use the full force of U.S. government departments and agencies (Department of State, Department of Commerce, Department of Justice) to enforce its claims for compensation from the host government. (2) OPIC lends to and insures projects in countries where no lender or insurer in the private sector is willing to lend, so a defendant country is not likely to want to offend either OPIC or the United States government by refusing to pay what it owes. If the country refuses to compensate OPIC, OPIC will most likely exit the country and not finance or insure any other projects in that country.¹⁹⁰

OPIC plays a dominant role in the political risk insurance market and its standard policy is publicly available. For these reasons its expropriation coverage is used to illustrate the issues likely to arise for companies affected by nationalization and expropriation. OPIC policies provide coverage for “total expropriation” and cover an act or series of acts by the host government that violate international law or materially breach local law and directly deprive the insured of fundamental rights in the insured investment. However, the standard OPIC policy does not further define when an expropriation constitutes a violation of international law therefore OPIC applies general principles of international law (previously discussed).¹⁹¹ That is, an expropriation violates international law when it is not for a public purpose, is discriminatory, is not accomplished by due process and is not followed by just compensation.

Use of Political Risk Insurance in the Oil and Gas Industry

At the end of 2013, the total amount of political risk insurance in force, related to foreign direct investment (not trade) was \$234.7 billion.¹⁹² The Multilateral Investment Guarantee Agency (MIGA) accounted for \$10.8 billion of that \$234.7 billion and within the MIGA insurance

¹⁹⁰ Ibid

¹⁹¹ Overseas Private Investment Corporation, OPIC Annual Report 2013, p. 2, http://www.opic.gov/sites/default/files/files/OPIC_AR2013_final.pdf

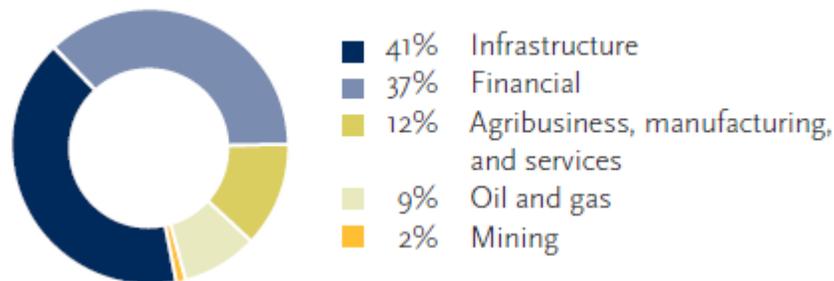
¹⁹² Berne Union Statistics 2008 – 2013, April 14, 2014, page 4, <http://www.berneunion.org/wp-content/uploads/2012/10/Berne-Union-2014-Charts-and-numbers-for-website.pdf>

portfolio, the political risk insurance in force related to oil and gas investments was \$918.4 million or 8.5% of the \$10.8 billion.¹⁹³ (See Figure 11)

Multilateral Investment Guarantee Agency

Figure 11 - Insurance Portfolio - Multilateral Investment Guarantee Agency (MIGA)

Outstanding investment guarantees portfolio, Total \$10.8 billion
(December 2012)



If other political risk insurers (OPIC, etc.) insure in roughly the same proportions then the total PRI insurance in force in the oil and gas sector is approximately \$20 billion ($\$234.7 \text{ billion} \times .085 = \19.95 billion). In 2014, the estimated total value of all global oil and gas assets was \$4.65 trillion.¹⁹⁴ These figures indicate that the use of PRI insurance by the oil and gas industry is relatively small compared to the oil and gas assets in place. This may be explained in part by the fact that many oil and gas assets are located in countries in which political risk is either insignificant or non-existent and in part by the fact that most oil companies choose to self-insure.

A senior official at MIGA suggested that the amount of PRI in the oil and gas sector is small for the following reasons (1) international oil companies have their own captive insurance companies and therefore self-insure (2) Oil companies place high value and trust in the quality of the relationship they have with the host government's leaders (3) infrastructure projects (electrical power generation plants, railroads, and dams) usually require more capital than all but the largest oil projects (4) Developing countries usually need help with infrastructure projects

¹⁹³ MIGA: Oil and Gas, Securing Oil and Gas Investments, MIGA Briefs, April 2013, <http://www.miga.org/documents/oil&gasbrief.pdf>

¹⁹⁴ Bloomberg New Energy Finance, Fossil Fuel Divestment: A \$5 trillion challenge, August 26, 2014, <http://about.bnef.com/white-papers/fossil-fuel-divestment-5-trillion-challenge/>

more often than with oil and gas projects and (5) foreign investors usually own only a small part of a given exploration block, thereby limiting their risk.¹⁹⁵

This same official observed that although the existence of a bilateral treaty between the parties is a consideration in deciding to insure a project, MIGA does not consider it critical, because MIGA will only insure projects in which the contract between the parties includes a provision for mediation and arbitration in the event of a dispute. In addition, MIGA only insures projects in countries that are members of MIGA and all members of MIGA sign a “Legal Protection Agreement” which guarantees MIGA the same rights as the country’s best treated “most favored” partners.

This official also noted that the basis of compensation varies depending on the nature of the loss. In the case of (1) expropriation, the compensation is based on net book value, (2) in the case of breach of contract MIGA requires mediation by a panel of three experts and if that fails then arbitration by an international court or tribunal (3) in the case of inconvertibility or transfer restrictions the amount of money is known, (4) in the case of property damage, the compensation is based on the cost of restoring the property to its prior condition. MIGA deposits the money in an offshore account for the claimant and the claimant receives compensation in a currency that is convertible.

6.9 Financial Reporting and Operational Transparency (Question #9)

The theoretical literature summarized in Chapter 3 argued financial reporting and operational transparency can reduce risk and increase economic feasibility because they reduce information asymmetry, bounded rationality, monitoring costs, and transaction costs. Financial reporting includes financial statements showing (1) revenue, expenses, net income, cash flow, assets, and liabilities; (2) the financial terms and conditions of specific transactions (purchase price, sales price, and due dates) and (3) legal disputes and potential liability. Operational transparency includes disclosure of the countries in which a company operates, its choice of partners, environmental compliance, wells drilled, new discoveries, reserve depletion rates, and total oil and gas reserves. This section addresses the following questions.

¹⁹⁵ MIGA, Telephone Interview with Senior Official at MIGA on September 22, 2014

Q₉

- (1) What is financial reporting quality and transparency?*
- (2) Can financial reporting quality be measured and if so how?*
- (3) Does financial reporting quality matter from a theoretical perspective?*
- (4) Does financial reporting quality matter from a practical perspective?*
- (5) Does the quality of financial reporting affect the amount of direct foreign investment in a country?*
- (6) How are oil and gas reserves measured? How accurate are these measurements?*
- (7) Does reserve reporting matter from a practical perspective?*

H₉

- (1) Financial reporting quality can be defined.*
- (2) Financial reporting quality can be measured.*
- (3) The quality of financial reporting does matter from a theoretical perspective.*
- (4) The quality of financial reporting does matter from a practical perspective.*
- (5) Financial reporting quality does affect the direct foreign investment in a country.*
- (6) Oil and gas reserves can be estimated but these estimates are frequently contested.*
- (7) Reserve reporting does matter from a practical perspective.*

6.9.1 Financial Reporting Quality

Financial reporting quality refers to the extent to which the financial statements of a firm provide accurate and complete information about the firm's financial and economic performance. Various measurement criteria have been developed to evaluate the quality of financial reporting. Table 4 below provides a summary of the methods most often used in the literature. They include: accrual models, value relevance models, research focusing on specific elements in the annual report, and methods that operationalize the qualitative characteristics of the information.¹⁹⁶

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¹⁹⁶ Ferdy van Beest, Geert Braam and Suzanne Boelens, "Quality of Financial Reporting: Measuring Qualitative Characteristics," NiCE Working Paper 09-108 April 2009, Nijmegen Center for Economics (NiCE) Institute for Management Research Radboud University Nijmegen, The Netherlands <http://www.ru.nl/nice/workingpapers>

Table 4 – Methods Used for Measuring the Quality of Financial Reporting

	Accrual Models	Value Relevance Literature	Specific elements in Annual Report	Qualitative Characteristics
Method	Examines the level of earnings management as a proxy for earnings quality	Examines the relationship between stock returns and earnings figures in order to measure the relevance and reliability of financial reporting information	Examines specific elements in the annual report in depth, by conducting an experiment.	Examines the level of decision usefulness of financial reporting information by operationalizing the qualitative characteristics
Advantages	Relatively easy to collect data in order to measure earnings management	Relatively easy to measure	Focus on financial reporting quality	Focus on financial reporting quality
Disadvantages	Focus on earnings quality	Focus on earnings quality	Focus only on selected elements	In general difficult to operationalize, causing measurement difficulties
	Indirect measure of financial reporting quality	Indirect measure of financial reporting quality	Difficult to measure	
	Difficult to estimate discretionary accruals	No insight is provided in the tradeoff between relevance and reliability		
Authors	e.g. Jones, 1999; Healy & Wahlen, 1999; Dechow et al., 1995	e.g. Barth et al., 2001; Choi et al., 1997; Nichols & Wahlen, 2004; Nelson, 1996	e.g. Hirst et al., 2004; Beretta & Bozzolan, 2004; 2004; Cohen et al., 2004	e.g. Schipper & Vincent, 2003; Van der Meulen, et al., 2007; Barth et al., 2006

Source: Ferdyn van Beest, Geert Braam and Suzanne Boelens, Quality of Financial Reporting: Measuring Qualitative Characteristics, NiCE Working Paper 09-108 April 2009, Nijmegen Center for Economics (NiCE) Institute for Management Research Radboud University Nijmegen, The Netherlands <http://www.ru.nl/nice/workingpapers>

In theory, high quality financial reporting and operational transparency should increase the efficiency of markets by reducing transaction costs, monitoring costs and surrounding uncertainty; and reducing the costs of asymmetric information, thereby expanding the limits of bounded rationality, and limiting the adverse effects of opportunism. Several empirical studies have concluded that higher quality financial reporting does increase market efficiency (Bushman and Smith, 2001; Healy and Palepu, 2001; Lambert, Leuz and Verecchia, 2007; Biddle and Hilary, 2006).¹⁹⁷ Market efficiency can be defined in two ways. (1) It can be defined in terms of

¹⁹⁷ Gary C. Biddle, Gilles Hilary, and Rodrigo S. Verdi, "How Does Financial Reporting Quality Relate to Investment Efficiency?" *Journal of Accounting and Economics* 48.2-3 (2009): 112-131

Bushman, R., and A. Smith, 2001. Financial accounting information and corporate governance. *Journal of Accounting and Economics* 31, 237-333.

Healy, P., and K. Palepu, 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31, 405-440.

transaction costs, monitoring costs and surrounding uncertainty, that is, the lower these costs are for a given transaction the more efficient the market is said to be. Market efficiency can also be defined in terms of the cost and consequences of asymmetric information, bounded rationality, and the adverse effects of opportunism. Understood in these terms, the higher the rate of return to investors for a given level of risk and the lower the cost of capital to borrowers for given level of risk, the more efficient the market is said to be.

The studies referenced above all evaluated market efficiency and the quality of financial reporting in the context of buying and selling of financial securities on an organized exchange. They did not relate market efficiency and the quality of financial reporting to foreign direct investment. However, the largest part of investment in the upstream sector of the oil and gas industry is made in the form of domestic or foreign direct investment. The question therefore arises, whether the quality of financial reporting in a country affects foreign direct investment inflows to that country in general and oil and gas exploration and development in particular. To study this question data on the capital spending and exploration expenditures (CAPEX) made by oil and gas companies in each country are needed, but this information is considered proprietary by oil and gas companies and therefore not publicly disclosed.

However, the World Bank does report the total foreign direct investment in each country based on figures provided by the member countries. Figure 12 below, compares total foreign direct investment as reported by the World Bank and the quality of financial reporting calculated by Tang, Chen and Lin.¹⁹⁸ Figure 12 suggests that there is no observable relationship between foreign direct investment inflows and the quality of the financial reporting in a country. The absence of a relationship, however, could be attributable to the size of each country, that is, countries with larger economies might attract more foreign direct investment than countries with smaller economies, no matter what the quality of financial reporting in the country.

Lambert, R., C. Leuz, and R. Verrecchia, 2007. Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research* 45, 385-420.

Biddle, G. and G. Hilary. "Accounting quality and firm-level capital investment". *The Accounting Review*, 81, (2006)963-982.

¹⁹⁸ QingliangTang, Huifa Chen and Zhijun Lin, "How to Measure Country Level Financial Reporting Quality," *Social Sciences Research Network*, May 18, 2012, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2114810

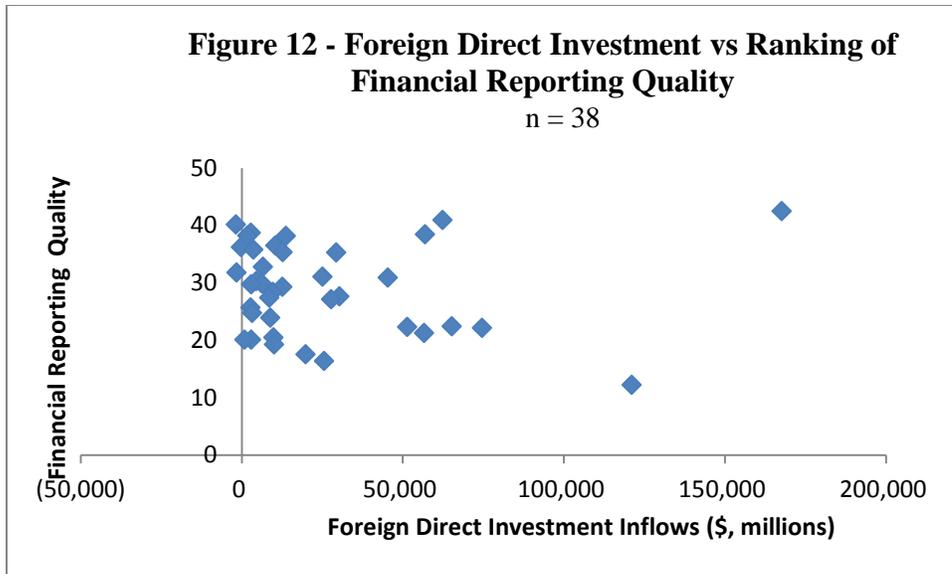
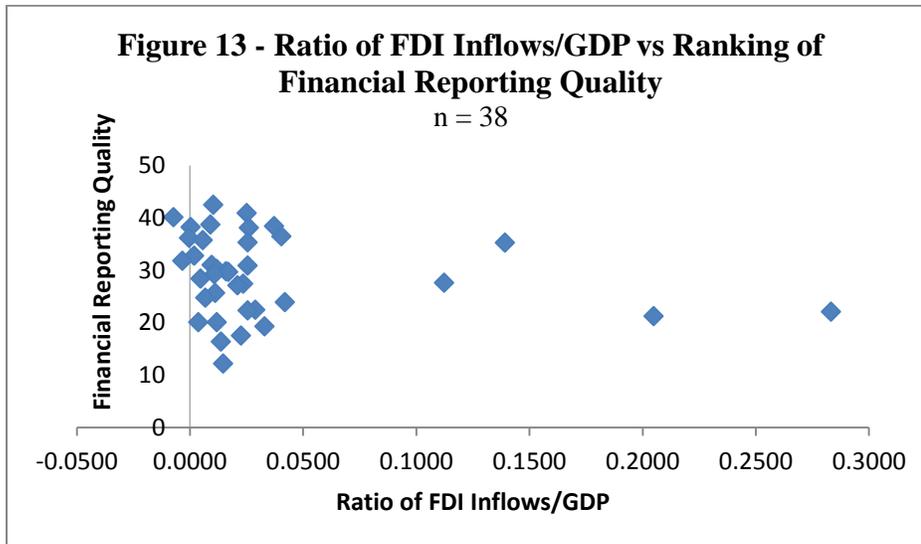


Figure 13 addresses this possibility by comparing the ratio of foreign direct investment inflows to GDP and the quality of financial reporting. The results, however, are similar. There is no observable relationship between the ratio of foreign direct investment inflows to GDP and the quality of financial reporting of public companies.



These results are somewhat disturbing because they imply that higher quality financial reporting *does not* increase the amount of direct foreign investment as theory suggests and the empirical work on the market for publicly traded securities indicates.

There are at least two possible explanations for this result. First, the quality of financial reporting by *public companies*, which is what the financial reporting index is based on, is not necessarily indicative of the quality of financial reporting related to foreign direct investment, because a contract between a foreign direct investor and a host country will always include a project accounting team comprised of personnel from the investor's organization and the host country's government or NOC. In addition, the project is likely to be audited by external auditors. In this environment, the project accounting team is likely to apply rigorous accounting methods to the project, no matter what the quality of financial reporting elsewhere in the country. Second, IOCs are compelled to invest in countries where oil and gas have been found or are likely to be found and are therefore forced to mitigate financial reporting risk in other ways, as noted above. If the quality of financial reporting could be measured in the context of direct foreign investment with the same accuracy as it has been measured in studies of the securities of public companies, there might be an observable relationship between the quality of financial reporting and foreign direct investment.

6.9.2 – Estimating and Valuing Reserves

Estimating and valuing reserves is the most difficult reporting challenge, because future production can only be approximated given the technical, geologic and pricing uncertainty surrounding oil and natural gas. The Society of Petroleum Engineers (SPE) and World Petroleum Council (WPC) jointly developed a reserve assessment methodology to address the technical uncertainty of estimating oil and gas reserves. The methodology uses a system that classifies oil and gas reserves into three categories (1) prospective (undiscovered reserves), (2) contingent (sub-commercial reserves), and (3) commercial reserves. This system includes both conventional and unconventional deposits (shale oil, shale gas and tar sands). As oil prices rise and extraction technology improves, conventional and unconventional oil resources are reclassified from sub-commercial to commercial reserves.¹⁹⁹

Reporting Oil and Gas Reserves

The first tier of reporting is performed by individual oil and gas companies (NOCs, IOCs and domestic oil companies). A second tier of reporting is carried out by public information agencies

¹⁹⁹ Nick A. Owen, Oliver R. Inderwildi and David A. King, "The Status of Conventional World Oil Reserves – Hype or Cause for Concern?," *Energy Policy*, Volume 38, Issue 8, August 2010, pp. 4743-4749

(the International Energy Agency, the U.S. Energy Information Administration, and the OPEC Secretariat) and private companies (BP and the Oil & Gas Journal). Owen et al concluded that in some cases, these organizations acknowledge sources of reporting error, but in general they reproduce the data obtained from the first tier reporting organizations with only small adjustments to account for differences in oil grades.²⁰⁰ They suggested that second tier sources make more optimistic estimates than independent analysts, because the second tier reporting organizations do not question the estimates made by the first tier, possibly because they consider such questions politically sensitive and diplomatically offensive.²⁰¹ In 2010, Owen et al concluded that that on average, *conventional* world proved oil reserves should have been revised down from 1,184 billion barrels and 1,241 billion barrels estimated by World Oil (WO) and the International Energy Agency (IEA) respectively, to approximately 903 billion barrels.²⁰² This represents a 24% to 27% reduction in the estimate of *conventional* world proved reserves. However, a senior official at the Department of Energy believes that the International Energy Agency (IEA) and the U.S. Energy Information Administration (EIA) make a diligent effort to evaluate first tier estimates and where necessary, reduce them.²⁰³

In 2010, the Oil & Gas Journal (O&GJ) estimated that *conventional and unconventional* world proved oil reserves were 1,354 billion barrels. Suggesting that in 2010, unconventional reserves accounted for 113 to 170 billion barrels of oil (1,354 – 1,241 and 1,354 – 1,184). The decision to include *unconventional* reserves complicates the estimation of world proved oil reserves because unconventional reserves are more expensive to recover and are therefore more sensitive to changes in the world price of oil. In addition, unconventional reserves are becoming an increasing percentage of total reserves. For example, at the end of 2013, BP and the Oil & Gas Journal estimated world proved oil reserves (*conventional and unconventional*) at 1,687.9 billion barrels²⁰⁴ and 1,644.5 billion barrels²⁰⁵, respectively. In 2011, U.S. Energy Information

²⁰⁰ Ibid

²⁰¹ Ibid

²⁰² Ibid

²⁰³ DOE, Telephone Interview with a Senior Official in the Office of International Affairs at the U.S. Department of Energy on September 29, 2014

²⁰⁴ BP, "BP Statistical Review of World Energy 2014," <http://www.bp.com/statisticalreview>, Last accessed on July 16, 2014

²⁰⁵ Conglin Xu and Laura Bell, "Worldwide Reserves, Oil Production Post Modest Rise," *Oil & Gas Journal*, 12/02/2013, <http://www.ogj.com/articles/print/volume-111/issue-12/special-report-worldwide-report/worldwide-reserves-oil-production-post-modest-rise.html>,

Administration estimated that commercially recoverable shale and tight oil worldwide was 32 billion barrels, but in 2013, the EIA estimated that recoverable shale/tight oil worldwide was 345 billion barrels.²⁰⁶ This increase in recoverable shale/tight oil was in part the result of an increase in the average global price of oil from \$79.50 per barrel in 2010 to \$108.66 per barrel in 2013. The decrease in the spot price of crude oil (West Texas Intermediate) from \$106 per barrel in June 2014 to \$56 per barrel at the end of December 2014 will reduce that quantity of conventional and unconventional oil and gas that is economically recoverable in the short term and will complicate the problem of estimating and valuing reserves.

Practical Relevance of Reserve Estimates

In the short term, current oil inventories, that is oil above ground, is the most important determinant of current (spot) oil prices and the level of capital investment (CAPEX) expended in the search for new oil and gas reserves. In the long term, however, estimates of proved and probable reserves below ground play the most important role in determining CAPEX and the supply and price of oil. If the actual proved and probable reserves turn out to be less than those estimated, the *current* price of oil may be lower than is justified by long term supply and demand. This problem could be made worse because it takes more time and more evidence to convince oil and gas company executives that an oil price increase will persist, than it does to convince them that an oil price decrease will persist. That is, an increase in oil price does not stimulate exploration drilling in the short run, but a decrease in oil price will cause an almost instantaneous reduction in exploration expenditures.²⁰⁷ This could result in under-investment in exploration and development and could set the stage for another rapid increase in the price of oil when it is discovered that reserves are overstated and capital spending has been too low.

6.10 Geopolitics and Global Governance (Question #10)

The previous sections have focused on the interaction between individual organizations and institutions. The first three questions in this section examine the interaction between

²⁰⁶ U.S. Energy Information Administration, Technically Recoverable Shale Oil and Shale Gas Resources: An Assessment of 137 Shale Formations in 41 Countries Outside the United States, EIA, June 13, 2013, <http://www.eia.gov/analysis/studies/worldshalegas/>

²⁰⁷ Klaus Mohn and Petter Osmundsen. "Asymmetry and Uncertainty in Capital Formation: An Application to Oil Investment," *Applied Economics*, (June 2011): 4387-4401

organizations and institutions acting together. The last three questions examine some unique relationships between oil companies and host governments.

Q₁₀

- (1) How important are multilateral treaties in the oil and gas industry?*
- (2) How important are international energy forums?*
- (3) Who is responsible for the quality of financial reporting in the international environment?*
- (4) How have signature bonuses affected NOCs, IOCs and host governments?*
- (5) What is energy diplomacy and does it really matter?*
- (6) Who is responsible for coordinating Foreign Direct Investment and National Security in the United States?*

H₁₀

- (1) There are a relatively small number of multilateral investment treaties and no global investment treaties.*
- (2) The impact of international energy forums has been limited in the oil and gas industry.*
- (3) The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) are the dominant rulemaking bodies for financial reporting.*
- (4) Signature bonuses have increased in size and create an obstacle to good national governance.*
- (5) The successes of energy diplomacy have been limited.*
- (6) There is a formal network of agencies and departments that are authorized to review foreign direct investment in the United States.*

6.10.1 Multilateral Treaties

In 2010, Goldthau observed that during the previous twenty-five years, the political and economic mainstream promoted the liberalization of energy trading, for example, the World Trade Organization (WTO), the North American Free Trade Agreement (NAFTA), the Energy Charter Treaty (ECT), the Asia-Pacific Economic Cooperation (APEC) and bi-regional forums such as the EU-Gulf Cooperation Council and the EU-Russian Dialogue, but direct foreign investments in energy were still managed through a “patchwork of national laws and bilateral treaties”.²⁰⁸ The Permanent Court of Arbitration only lists two multilateral investment treaties, the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (1966) and the Energy Charter Treaty (1994). There are still no internationally agreed upon set of rules for trading energy resources and energy investment. The absence of an international agreement or even a substantial number of multilateral agreements is reflected in the small number of cases that have been brought before the ICSID and other tribunals, in which

²⁰⁸ Andreas Goldthau and Jan Martin Witte, editors, *Global Energy Governance – The New Rules of the Game* (Berlin: Global Public Policy Institute, 2010) p. 13

the legal instrument being referenced was a multilateral treaty. For example, of the 68 investment cases related to oil and natural gas reported by UNCTAD, 51 were brought with reference to a bilateral investment treaty, 9 were brought with reference to the Energy Charter Treaty, 3 with reference to NAFTA, 2 with reference to a combination of a bilateral investment treaty and the Energy Charter Treaty. In 3 cases, the legal instrument being referenced was either ambiguous or unknown.

Does the absence of an international energy investment agreement or even a substantial number of multilateral agreements matter? In section 6.2 it was noted that in 2012 and 2013, the total number of deals (lease/concession agreement, production sharing agreements, technical service contracts, joint ventures, acquisitions and divestitures) in the oil and gas industry, was 1,800 and 1,400, respectively.²⁰⁹ However, only 3 cases were brought before a court or tribunal in 2012, 4 in 2011, 5 in 2010, 2 in 2009 and 8 in 2008. Therefore a relatively small number of transactions result in a dispute that must be adjudicated with reference to a bilateral treaty or multilateral treaty. It was also noted that the outcome of an international court proceeding or tribunal is dependent on the standard of treatment applied by the court or tribunal and the definition of fair and equitable compensation. Therefore, even if there was an international investment treaty or an extensive network of multilateral investment treaties, the problems of interpretation of specific provisions and standards of treatment would still exist.

6.10.2 International Energy Forums

The International Energy Forum (IEF)

The International Energy Forum's (IEF) mission is "to foster greater mutual understanding and awareness of common energy interests among its members".²¹⁰ The IEF has 76 member countries and all of them have signed the IEF Charter, which outlines a framework for "global energy dialogue through this inter-governmental arrangement".²¹¹ The member countries of the IEF account for approximately 90% of world oil and natural gas supply and demand. Its members include not only the consuming and producing countries of the IEA and OPEC, but also

²⁰⁹ E & Y, "Global Oil and Gas Transactions Review 2013," [http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/\\$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf)

²¹⁰ International Energy Forum, <http://www.ief.org/about-ief/history.aspx>

²¹¹ *Ibid*

countries outside of their memberships, including Argentina, China, India, Mexico, Oman, Russia and South Africa.

The IEF met for the first time in Paris in 1991. Its biennial Ministerial Meetings are the largest gathering of Energy Ministers in the world. Through the Forum and its associated events, IEF Ministers, their officials, energy industry executives, and other experts exchange information regarding common energy interests and global energy security. However, this inclusiveness has not guaranteed a successful and constructive dialogue.²¹²

For example, during a meeting of the (IEF) in London in 2008, it was suggested that planned capital expenditures be collected from international and national oil companies and published. However, persuading IOCs and NOCs to publish their planned capital expenditures ultimately proved to be impossible, because it demanded a high level of accuracy and required companies to disclose proprietary information about their current and future operations.²¹³ Consequently, although transparency would have increased market efficiency and reduced risk, IOCs and NOCs still only report in the level of detail required in their home country. Consequently, in the last twenty years, the main achievement of the IEF has been to raise awareness of the high level of energy interdependence among nations and the compilation and publication of historical data regarding production, consumption and capacity expansion, but not future investment spending (CAPEX). Three of these IEF initiatives are discussed below.

*Joint Oil Data Initiative (JODI)*²¹⁴

At the 7th IEF Ministerial in Riyadh, Saudi Arabia in 2000, six organizations: Asia-Pacific Economic Cooperation (APEC), Statistical Office of the European Union (Eurostat), International Energy Agency (IEA), Latin American Energy Organization (OLADE), Organization of the Petroleum Exporting Countries (OPEC) and United Nations Statistical Division (UNSD) collaborated in the development of the *Joint Oil Data Exercise*. The *Joint Oil Data Exercise* was subsequently renamed the *Joint Oil Data Initiative* and was established as a permanent organization of the IEF. In January 2005, following the endorsement

²¹² Ibid

²¹³ Enno Harks, *The International Energy Forum and the Mitigation of Oil Market Risks*, Chapter 12 in Andreas Goldthau and Jan Martin Witte, editors, *Global Energy Governance – The New Rules of the Game* (Berlin: Brookings Institution Press, 2010) p. 261

²¹⁴ Joint Organizations Data Initiative website, <http://www.jodidata.org/about-Jodi.aspx>

by Energy Ministers, the IEF secretariat assumed responsibility for coordinating the *Joint Oil Data Initiative*. The Initiative's oil database (JODI Oil) provides comprehensive statistics on global oil production and consumption on a monthly basis.

In November 2005, the JODI partners published the JODI Oil World Database (www.jodidata.org), a first step to improved transparency in the oil and gas markets. The successful establishment of the oil data database subsequently led to an initiative to develop a natural gas database (JODI Gas) and annual data on upstream and downstream capacity and expansion plans (JODI Investment).

6.10.3 Financial Reporting

The institutions responsible for financial reporting include the International Accounting Standards Board (IASB), the Financial Accounting Standard Board (FASB), the Securities and Exchange Commission (SEC) and its counterparts in Europe and Asia. Beginning in the 1990s, the most significant developments in financial reporting have been (1) a convergence between the International Financial Reporting Standards (IFRS) developed and updated by the IASB and the U.S. Generally Accepted Accounting Principles (U.S. GAAP) developed and updated by the FASB; and (2) the increasing adoption of IFRS worldwide. The influence of the IASB dominates other international institutions engaged in international accounting issues, such as the OECD Working Group on Accounting Standards, the UN Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting and the European Union's Accounting Advisory Forum.²¹⁵

The ascendance of IFRS since the 1990s has had a significant impact on financial reporting, capital markets, companies listed on public exchanges and investors. These companies are able to raise financial capital in other countries without having to first restate their financial results using that country's accounting standards. In addition, investors have access to financial data that is more consistent and comparable. In 2005, approximately 15,000 companies listed on exchanges around the world were preparing and presenting their financial results in compliance with the International Financial Reporting Standards (IFRS) and at the same time, the differences

²¹⁵ Jochen Zimmermann and Jorg R. Werner. *Regulating Capitalism? The Evolution of Transnational Accounting Governance* (New York, NY: Palgrave McMillan, 2013) p. 15

between IFRS, U.S. GAAP and Japanese GAAP were also diminishing. The convergence of the IFRS standards, U.S. GAAP and Japanese GAAP since 1990, is an example of how organizations, in this case investors, oil companies and financial organizations operating through the institutions of the IASB, FASB and SEC have reshaped the institutional environment to increase the efficiency of financial reporting and capital allocation.

6.10.4 Signature Bonuses

Signature bonuses are a part of the bid made by IOCs for the rights to explore and develop a particular block or blocks in the host country's territory. These payments are made by the IOC to the host government immediately or shortly after, a contract is signed. As the price of crude oil has increased, the amount of these bonuses has also increased. In the beginning, signature bonuses were between \$1 million and \$10 million per bid, however, recent exploration and development agreements have included signature bonuses exceeding \$100 million.²¹⁶ The size of these signature bonuses and the occasional diversion of these payments by government officials to personal bank accounts have produced an ongoing controversy about their impact on host country governance.

For example, in July 2000, Marathon Oil made a signature bonus payment of \$13.7 million to *Sonangol*, the national oil company of Angola. It was the first in a series of three payments for the rights to develop a block offshore Angola.²¹⁷ The payment was made to a bank in Jersey, one of the Channel Islands offshore the United Kingdom. (Jersey laws permit a high level of bank secrecy and zero tax rates on income from foreign sources.) Subsequently, several news stories reported that the funds were rewired within a matter of hours to other *Sonangol* accounts around the world. Some of these were later proven to be the personal accounts of the Angolan president, Angolan government ministers and other government officials.²¹⁸

²¹⁶ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PenWell Corporation, 2011) p. 228

²¹⁷ David Leigh, "Angolan Oil Millions Paid Into Jersey Accounts," *The Guardian*, November 4, 2002; Henrie E. Cauvin, "I. M. F. Skewers Corruption in Angola," *New York Times*, November 30, 2002; Justin Pearce, "IMF: Angola's 'missing millions': The sum is three times the amount paid in aid," BBC, Friday October 18, 2002; "Angola battles with IMF accusation of corruption" *Alexander's Gas and Oil Connections*, News and Trends Africa, Vol. 7, Issue #22, November 13, 2002.

²¹⁸ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 229

Alleged corruption in other countries, similar to the kind reported in Angola, led to demands by several international organizations for transparency in the payments made by IOCs to national governments. In February 2001, in response to these demands, BP announced that it would begin publishing an annual statement of payments made to *Sonangol*. BP had paid \$111 million for the development rights to Angola's Block 31.²¹⁹ *Sonangol*'s Chief Executive Officer, Manuel Vicente, responded with a letter to BP's Chief Executive Officer and Chairman, John Browne, stating that *Sonangol* considered BP to be "violating the conditions of legal contracts signed with *Sonangol* . . . and if confirmed, is a sufficient reason to apply measures established in Article 40 of the PSA [production sharing agreement] i.e., contract termination".²²⁰ Since that incident, no other major international oil company has reported financial payments made in the form of signature bonuses. They have chosen instead, to conform to the host country's demand for confidentiality, in order to preserve their relationship with the host government, avoid contract termination and maintain access to exploration blocks in future rounds of bidding.

However, the lack of transparency associated with these cash payments to governments and NOCs is considered to be a major cause of corruption in many oil producing countries.²²¹ To address this problem a public interest group, Publish What You Pay U.S. (PWYP) was formed in 2004 to advocate for greater disclosure of payments made by IOCs to host governments, however, the success of this campaign has been limited for the reasons cited above.

6.10.5 Energy Diplomacy

Energy diplomacy can be defined as the use of foreign policy to secure access to energy supplies abroad and promote government to government cooperation in the energy sector.²²² Energy diplomacy is motivated by the belief that importing and exporting countries can enhance the security of supply; and improve and protect the competitive position of other sectors of their economy, by giving their domestic oil and gas companies a competitive advantage in buying and selling oil and natural gas.

²¹⁹ Ibid

²²⁰ Ibid

²²¹ Ibid

²²² Andreas Goldthau, and Jan Martin Witte, *Global Energy Governance - The New Rules of the Game*, Chapter 2 – Energy Diplomacy in Trade and Investment of Oil and Gas (Berlin: Global Public Policy Institute, 2010)

For example, the Chinese government, through its state-owned banks and sovereign wealth fund, has been particularly aggressive in its lending to developing countries in Africa and Latin America. China has provided economic development assistance to these countries in exchange for access to natural resources. Countries that do not have credit ratings of sufficient quality to borrow from international commercial banks have gained access to capital by pledging proved oil and natural gas reserves in their country as collateral, in exchange for loans needed to develop their oil and gas resources and to fund public infrastructure projects. These agreements are frequently referred to as “loans for oil agreements”.

Russia has until recently, relied more on subsidies, price incentives, preferential relationships with the states of the former Soviet Union, and occasional military cooperation or intimidation. This system of barter was tried in Ukraine (in-kind gas payments in exchange for political allegiance to Russia), and Belarus (transit and political allegiance) for oil and gas.²²³ In 2014, Russia began reducing subsidies and instead agreed to provide oil and gas under long term supply agreements in exchange for the loans it needs to build pipeline and transport infrastructure and acquire entry into the downstream markets of other countries, particularly in Central and East Asia (Kazakhstan, Turkmenistan and China).

Loans for Oil Agreements

Pipeline projects are particularly well suited to loans for oil deals because pipelines do not have alternative uses, thereby reducing the risk that either party will abrogate the contract. See for example the loans for oil and gas agreements between China and Russia, and China and Kazakhstan (Appendix VII). In addition, in a loan for oil deal, the resource owner retains ownership of the oil and natural gas, precluding the risk of expropriation.

Some analysts have dismissed loans for oil deals for not delivering what they promised. For example, despite its aggressive use of loans for oil, the share of equity oil (the amount of crude oil produced by China’s foreign oil assets remains relatively small. Equity oil accounts for only 12% of China’s oil consumption and only 1% of global oil production.²²⁴ Other analysts have drawn similar conclusions, but for a different reason. They claim that China has received

²²³ Ibid

²²⁴ Kang Wu, “China’s Overseas Oil and Gas Investment: Motivation, Strategies, and Global Impact,” *Oil and Gas Energy Law* 6, no. 1. (2008) 1-9

relatively little in the form of engineering and construction contracts from the countries to which it has loaned money and in some cases has received less oil and natural gas than was agreed, particularly from Venezuela.^{225 226}

Energy diplomacy in the form of loans for oil have also been criticized from the perspective of the borrowing country, because they frequently require that 60% to 70% of the funds advanced by the Chinese government be spent on projects constructed by Chinese engineering and construction companies, which may ultimately prove to be “white elephants”, that is, an asset which when completed, the state cannot dispose of, but the operating and maintenance costs exceed its actual use or value. In addition, it has been alleged that too little is being spent on developing the technical competencies of the local workforce that will be needed to operate and maintain these facilities after they are completed, including those that are for oil and gas production.²²⁷

Furthermore, they note that the market for oil is global and “liquid” and argue that these characteristics limit the value of energy diplomacy. For example, they argue that an increase or decrease in the global supply of oil will immediately translate into a change in the price of oil worldwide for all oil consuming countries. Consequently, it does not matter who gets the crude out of the ground (China, United States or Venezuela) but how much oil is available worldwide.²²⁸ They also argue that energy diplomacy aimed at foreign suppliers makes no difference to producing countries, provided the crude oil they produce reaches the global market somehow.²²⁹ However, this microeconomic analysis gives little, if any weight, to the fact that energy diplomacy involves more than simply establishing a diplomatic relationship between an oil exporting country and an oil importing country. Energy diplomacy frequently leads to legally binding contracts that include specific price provisions that may lock in a below-market oil or gas price and a dedicated source of supply for years. These benefits are directly related to the

²²⁵ Kelly Hearn, “Venezuelan oil a risky investment for China,” *The Washington Times*, Monday, March 12, 2012 <http://www.washingtontimes.com/news/2012/mar/12/venezuelan-oil-a-risky-investment-for-china/#ixzz31tLhnzrl>

²²⁶ Bo Kong, *China’s International Petroleum Policy* (Santa Barbara: Praeger Security International, 2010) p. 137

²²⁷ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011)

²²⁸ Andreas Goldthau and Jan Martin Witte, *Global Energy Governance - The New Rules of the Game*, Chapter 2 – Energy Diplomacy in Trade and Investment of Oil and Gas (Berlin: Global Public Policy Institute, 2010)

²²⁹ Ibid

issues of organizational arrangements, gained control, asset specificity, strategic behavior, contractual safeguards, surrounding uncertainty and bargaining strength.

In addition, the market for natural gas is still a regional market, because most natural gas is delivered by pipeline rather than by LNG tanker. Even the neo-classical economists would acknowledge that in a regional market, energy diplomacy can be effective, because a natural gas pipeline connects the exporting country's gas fields and the importing country's markets, and after it is built there are no efficient alternatives to this relationship.

6.10.6 Foreign Direct Investment and National Security

The Committee on Foreign Investment in the United States (CFIUS) is an inter-agency committee "authorized to review transactions that could result in control of a U.S. business by a foreign person ('covered transactions') in order to determine the effect of such transactions on the national security of the United States".²³⁰

CFIUS was involved in the China National Offshore Oil Company's (CNOOC) proposed acquisition of Unocal. Although this acquisition was not opposed by CFIUS and the Bush Administration, it was criticized by several members of Congress and after a vote in the United States House of Representatives the bid was referred to the President on the grounds that its implications for national security needed to be reviewed. While this review was still in progress, Unocal was acquired by Chevron.

²³⁰ CFIUS, Committee on Foreign Investment in the United States, <http://www.treasury.gov/resource-center/international/Pages/Committee-on-Foreign-Investment-in-US.aspx>

Chapter 7 Case Studies

This chapter presents six case studies. They include the *Frade* Oil Field offshore Rio de Janeiro, Brazil; the Gorgon Natural Gas project in the Indian Ocean off the northwest coast of Australia; the BTC Oil Pipeline through Azerbaijan, Georgia and Turkey; the DeepWater Horizon Oil Drilling Rig in the Gulf of Mexico; Expropriation of Oil and Gas Assets in Venezuela and a brief digression on events in Argentina; and the TNK-BP Joint Venture Oil Venture in Russia. These cases were chosen because of their size and complexity and because together they illustrate the wide range of political risks that can be encountered during oil and gas exploration projects. The events in each case study are presented in chronological order. At the end of each case there is an analysis of those events as they relate to the theory presented in Chapter 3 and the findings presented in Chapter 6. The cases are analyzed using an *explanation building* approach.

7.1 Case 1 - The Frade Field

The Frade oil field is located in the Northern Campos Basin, approximately 370 kilometers offshore Rio de Janeiro, Brazil at a water depth of 1,100 meters (3,609 feet). The field was discovered in 1986. The project is a joint venture in which Chevron is the project operator holding a 51.7% interest. Petroleo di Brasileiro (Petrobras) has a 30% interest and Frade Japao Petroleo Limitada (FJPL), a Japanese consortium has an 18.3% interest.

Conceptual engineering studies and the acquisition of 3-D seismic data were completed in 2000 by Texaco.²³¹ In June 2008, the process of installing subsea pumps and valves on the seafloor began. There were several delays related to the drilling rig and the floating, production, storage and offloading vessel (FPSO).²³² Recoverable reserves are estimated at 200 to 300 million barrels of oil. The cost of developing the field was estimated at \$2.8 billion.²³³ Oil production began on June 20, 2009. The project was expected to achieve peak production of 90,000 barrels per day of crude oil and petroleum gas liquids in 2011.²³⁴ This project is included because of its size and because it demonstrates the operation of a legal system that is not entirely impartial.

²³¹ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 129

²³² *Ibid*, p. 131

²³³ SUBSEAIQ Offshore Oil Field Development, http://www.subseaiq.com/data/Project.aspx?project_id=313&AspxAutoDetectCookieSupport=1, Last updated September 13, 2013

²³⁴ *Ibid*

Timeline

11/07/2011 - Oil began to seep from cracks in the seabed above the field after a drilling accident in November 2011.²³⁵

11/09/2011 - The wellhead was tightly sealed and the leak was stopped in four days. About 18 vessels were deployed to support the oil sheen remediation and the activities necessary for well abandonment. The total oil spilled was estimated at 2,700 to 3,600 barrels.²³⁶

11/20/2011- Development-drilling operations in the field remained suspended. Production from the field was maintained at approximately 79,000 barrels of oil equivalent per day.²³⁷

11/22/2011 – The Brazilian government imposed a \$28 million fine on Chevron for causing an offshore oil spill.²³⁸ The ANP (Brazilian National Petroleum Agency) cited Chevron for 25 infractions related to the spill. Chevron agreed to pay the agency more than \$17 million in fines. Drill-rig operator Transocean was cleared of any liability.²³⁹

11/25/2011. Brazilian prosecutors sought 20 billion reals (US \$10.9 billion) in damages from Chevron and offshore drilling contractor Transocean Ltd for the 3,600 barrel leak in the *Frade* field.²⁴⁰

12/02/2011 - Chevron Brazil Upstream Frade, a subsidiary of Chevron Corp., was ordered by Brazil's National Petroleum Agency (ANP) to shut in one of its 11 production wells and four “produced water” injection wells at Chevron’s offshore Frade Floating Production Storage and Offloading (FPSO) facility. The production wells cited by the ANP accounted for less than 10 percent of *Frade's* total production of about 79,000 barrels per day.²⁴¹

²³⁵ Gulf Oil and Gas, “Oil Spill of Frade Field in Brazil -- Special Report,” <http://www.gulfoilandgas.com/webpro1/projects/3dreport.asp?id=104359>, Last accessed on May 7, 2014

²³⁶ *Ibid*

²³⁷ *Ibid*

²³⁸ *Ibid*

²³⁹ *Ibid*

²⁴⁰ *Ibid*

²⁴¹ SUBSEAIQ Offshore Oil Field Development, http://www.subseaiq.com/data/Project.aspx?project_id=313&AspxAutoDetectCookieSupport=1, Last updated September 13, 2013

The possible existence of a hydrogen sulfide (H₂S) gas leak was the basis for ANP requesting the wells be closed temporarily. Chevron said that it respected the decisions of the ANP and would respond appropriately to the agency's requests for additional information. Chevron also said it would continue to keep the Brazilian agencies fully informed and work with them to address their specific concerns regarding Chevron's activities in Brazil. Chevron informed the ANP that it had conducted regular monitoring of the hydrogen sulfide leak and had safety systems and processes in place to ensure the safety of employees, contractors and operations at all times. Chevron said it was confident it would successfully respond to the ANP's concerns and be able to resume operation of its production and injection wells.²⁴²

2/3/2012 – Chevron cemented a well to stop the oil and gas seep through the fissures as a first step toward the capping and abandonment of the appraisal well.²⁴³

03/03/2012 - Chevron identified a new small seep in another part of the *Frade* field. Chevron notified the Brazilian authorities and immediately placed containment devices on the source. The total volume of this intermittent seep was approximately one barrel of oil. Chevron and its partners temporarily suspended production at the field as a precautionary measure while Chevron conducted a comprehensive technical analysis of the cause of this new seep and additional studies on the geological structure of the field.²⁴⁴

03/15/2012 – Chevron's subsidiary Chevron Brasil Upstream Frade Limitada requested authorization to temporarily suspend production operations at the *Frade* Field because of the new seep and subsidence in the area. The company said it would conduct a comprehensive technical study and prepare a complementary study to better understand the geological features of the area, by working with their partners and seeking necessary approvals from the National Petroleum Agency (ANP). The decision was endorsed by Chevron's partners. The company

²⁴² Ibid

²⁴³ Gulf Oil and Gas, "Oil Spill of Frade Field in Brazil -- Special Report,"

<http://www.gulfoilandgas.com/webpro1/projects/3dreport.asp?id=104359>, Last accessed on May 7, 2014

²⁴⁴ Ibid

filed its request with the appropriate regulatory agencies and anticipated a response fairly quickly.²⁴⁵

04/04/2012 - A Brazilian federal prosecutor initiated a second 20 billion *real* (\$10.9 billion) lawsuit against Chevron and driller Transocean, doubling the claim against the companies even though critics assailed the prosecutor as overzealous.²⁴⁶ Both companies also faced criminal and civil lawsuits related to the spill. The criminal lawsuit was dismissed, but federal prosecutors appealed that decision. The two civil lawsuits sought approximately \$21.8 billion in damages. In response, Chevron offered to pay approximately \$150 million to settle the case.²⁴⁷

08/6/2012 - Chevron appealed against an injunction banning it and its drilling contractor Transocean Ltd from operating in Brazil while civil and criminal charges over the oil spills were being adjudicated.²⁴⁸

08/29/2012 - An injunction banning Chevron and Transocean from operating in Brazil was upheld by a panel of three Brazilian federal judges, while charges related to the November 2011 oil spill were being considered by the Brazilian court.²⁴⁹

02/20/2013 - A Brazilian judge dismissed criminal charges against Chevron Corp., Transocean Ltd and 17 of their employees related to the offshore oil spill.²⁵⁰

04/08/2013 - Chevron Corp was authorized to restart production at the *Frade* field for a period of 12 months. Output from an additional two wells was also approved, but only for two months.²⁵¹

²⁴⁵ SUBSEAIQ Offshore Oil Field Development,
http://www.subseaiq.com/data/Project.aspx?project_id=313&AspxAutoDetectCookieSupport=1, Last updated September 13, 2013

²⁴⁶ Gulf Oil and Gas, "Oil Spill of Frade Field in Brazil -- Special Report,"
<http://www.gulfoilandgas.com/webpro1/projects/3dreport.asp?id=104359>
Last accessed on May 7, 2014

²⁴⁷ SUBSEAIQ Offshore Oil Field Development,
http://www.subseaiq.com/data/Project.aspx?project_id=313&AspxAutoDetectCookieSupport=1, Last updated September 13, 2013

²⁴⁸ Gulf Oil and Gas, "Oil Spill of Frade Field in Brazil -- Special Report,"
<http://www.gulfoilandgas.com/webpro1/projects/3dreport.asp?id=104359>
Last accessed on May 7, 2014

²⁴⁹ *Ibid*

²⁵⁰ *Ibid*

²⁵¹ *Ibid*

04/15/2013 - Final documents allowing a restart of production were issued.²⁵²

04/30/2013 - Chevron was in the final stages of obtaining authorization from local oil regulators and was expected to begin production soon.²⁵³

10/01/2013 - A Brazilian federal judge dismissed the two lawsuits totaling \$21.8 billion against Chevron and approved a negotiated settlement for an undisclosed amount, a decision that closed a two-year legal battle over the oil spill in the *Frade* Field.²⁵⁴

04/01/2014 - The Brazilian National Petroleum Agency (ANP) authorized Chevron to resume full production at the *Frade* field.²⁵⁵

Case Analysis

Brazil was heavily criticized for the over-zealous manner in which regulators and prosecutors pursued Chevron for what was regarded in the industry as a minor accident. Estimates were that 2,400 to 3,600 barrels of crude oil leaked into the Atlantic Ocean.²⁵⁶ (The consensus estimate of the oil spill in Prince William Sound in 1989 when the *Exxon Valdez* ran aground is 260,000 barrels²⁵⁷ and the U.S. Government has estimated the oil spill in the Gulf of Mexico in 2010 when BP's Deepwater Horizon drilling platform caught fire and sank, at 4.9 million barrels of oil.²⁵⁸

Although, Chevron and its partners were the targets of a \$21.8 billion lawsuit and criminal charges for a relatively small oil spill, the criminal charges were ultimately dismissed by a Brazilian federal judge and the civil charges were settled for an undisclosed amount. The

²⁵² *ibid*

²⁵³ *ibid*

²⁵⁴ *ibid*

²⁵⁵ Upstream, "Chevron OK'd for Full Frade Restart", April 1, 2014, <http://www.upstreamonline.com/epaper/article1357081.ece>, Last accessed on May 8, 2014*

²⁵⁶ SUBSEAIQ Offshore Oil Field Development, http://www.subseaiq.com/data/Project.aspx?project_id=313&AspxAutoDetectCookieSupport=1, Last updated September 13, 2013.

²⁵⁷ Exxon Valdez Oil Spill Trustee Council. "Questions and Answers," <http://www.evostc.state.ak.us/index.cfm?FA=facts.QA> <http://www.evostc.state.ak.us/index.cfm?FA=facts.QA>, Retrieved May 26, 2009.

²⁵⁸ U. S. Coast Guard. "On Scene Coordinator Report on Deepwater Horizon Oil Spill" September 2011. http://www.uscg.mil/foia/docs/dwh/fosc_dwh_report.pdf.

excessive charges originally brought against Chevron and its partners suggests that some prosecutors in Brazil were driven more by political considerations than legal or substantive considerations. This may explain in part why the Rule of Law in Brazil is rated just 51.7 on a scale from 0 to 100.

In this case, however, the Brazilian federal judge's decision was enough to make it unnecessary for Chevron to take the case before an international court or tribunal, suggesting that a country's legal system does not need to work perfectly, but only well enough to compensate for deficiencies in other parts of the country's legal system.

Second, Chevron's decision to pay in excess of \$150 million to settle the case rather than keep production shutdown after the panel of three federal judges upheld an injunction banning Chevron and Transocean from operating in Brazil, demonstrates the bargaining leverage that national governments and their agencies acquire after the sunk costs in exploratory drilling, development and production equipment have been made.

Third, the defendants Chevron and Transocean, did not bring the dispute with the Brazilian regulatory agencies or the prosecutor before an international court or tribunal, but instead chose to seek a solution in the Brazilian courts and ultimately agreed to a settlement. The reluctance to resort to an international court or tribunal, except in those cases in which the investor believes he is unlikely to receive an impartial hearing in a domestic court, is also evident in the DeepWater Horizon case (Case #4). This supports the observation that oil and gas companies try to avoid bringing a case before an international court or tribunal, if possible.

Fourth, there is no evidence that the United States government tried to intervene on Chevron's behalf, at least no evidence that made its way into the public record, supporting Lipson's observation that national governments seldom intervene in investment disputes on behalf of their citizens. This appears to also be true of Venezuela's expropriation of Conoco Philips' and ExxonMobil's assets in Venezuela (Case #5). There is also no evidence that the British government intervened on behalf of BP in the dispute between TNK-BP and the Russian regulatory authorities (Case #6) or on behalf of BP regarding its environmental liability in the

DeepWater Horizon oil spill (Case #4). The Gorgon Field (Case #2) and the BTC Pipeline (Case #3) did not involve a dispute with any national government.

7.2 Case 2 – The Gorgon Field

The Gorgon project, in the Indian Ocean off the northwest coast of Australia was once considered stranded gas (not recoverable) but is now part of one of the most complex and expensive LNG projects in the world.²⁵⁹ The Gorgon project is a joint venture between Chevron (47%, project operator), ExxonMobil (25%), Shell (25%), Osaka Gas (1.25%), Tokyo Gas (1%) and Chubu Electric Power (0.417%) When the project began in 2009, the cost was estimated at 43 billion Australian dollars, (37 billion U.S. dollars; 3.4 trillion Japanese yen). The field is estimated to contain more than 13.8 trillion cubic feet of natural gas (the equivalent of 2.25 billion barrels of oil) and is expected to have a production life of approximately 40 years.²⁶⁰ This case is included because of the size of the project, the magnitude of the cost overruns, and because it illustrates the economic consequences of unanticipated economic events.

Timeline

04/24/2009 - Chevron requested approval from Australian authorities to expand its Gorgon LNG production capacity to 15 million metric tons per year to compensate for rising development and production costs.²⁶¹

04/30/2009 - The Western Australian EPA approved Chevron's request for authorization to add a third, 5 million metric-tons-per-year LNG train (unit) to the original two-train proposal already approved for Barrow Island. Chevron continued to assess the geologic and environmental conditions as it worked toward a final investment decision in the second half of 2009.²⁶²

08/10/2009 - Environment Minister, Donna Faragher, gave final environmental approval for the proposed Gorgon gas field development on Barrow Island, but this approval also imposed new

²⁵⁹ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 351

²⁶⁰ *Ibid*, p. 352

²⁶¹ SUBSEAIQ Offshore Field Development, http://www.subseaiq.com/data/Project.aspx?project_id=271, Last updated September 19, 2012

²⁶² *Ibid*

environmental conditions requiring higher levels of protection for regionally significant coral reefs and flat-back marine turtles.²⁶³

09/01/2009 – Minister of Mines and Petroleum, Norman Moore, offered the Gorgon joint venture partners, production licenses for its biggest natural gas fields.²⁶⁴

09/14/2009 - Development proposals for the project were approved by the Premier of Western Australian State, Colin Barnett, and production licenses were granted by the Australian Minister for Resources and Energy, Martin Ferguson.²⁶⁵

12/01/2009 - The construction of a three-train (unit) 15 million metric ton per year LNG facility for the Gorgon LNG Project began.²⁶⁶

12/14/2009 - Chevron made another natural gas discovery in the Carnarvon Basin offshore Western Australia with its Satyr-1 well.²⁶⁷

01/26/2010 - A third gas discovery was made in the Greater Gorgon Area in the Carnarvon Basin offshore Western Australia.²⁶⁸

02/09/2011 - Chevron made an additional discovery in the Orthrus-2 well located in the WA-24-R permit area in the Carnarvon Basin offshore Western Australia.²⁶⁹

01/19/2012 – Chevron appraised the Satyr-3 well in the Exmouth Plateau area of the Carnarvon Basin, offshore Western Australia and concluded that it was commercially viable.²⁷⁰

07/23/2012 - Chevron made a natural gas discovery in the Greater Gorgon area of the Carnarvon Basin, offshore Western Australia.²⁷¹

²⁶³ *ibid*

²⁶⁴ *ibid*

²⁶⁵ *ibid*

²⁶⁶ *ibid*

²⁶⁷ *ibid*

²⁶⁸ *ibid*

²⁶⁹ *ibid*

²⁷⁰ *ibid*

²⁷¹ *ibid*

09/2012 - Chevron continued a successful run in the Greater Gorgon area offshore Western Australia with the announcement of positive results from the Satyr-2 exploration well.²⁷²

10/2012 - Australian energy minister, Martin Ferguson, said the carbon dioxide (CO₂) capture and sequestration project related to Chevron's Gorgon LNG project was on schedule and would begin injection of CO₂ in 2015. (The world's largest carbon capture and sequestration project was designed to inject 3.5 million tons of carbon dioxide per year at a depth of about 2,300 meters below Barrow Island off Western Australia.)²⁷³

12/06/2012 - Chevron increased the estimated cost of the Gorgon project by \$15 billion U.S., bringing the total cost of the project to \$52 billion U.S. Chevron attributed the cost increase primarily to labor shortages, logistics challenges and the strength of the Australian dollar. Despite the increase in the project's cost, Chevron said that the increase in the price of crude oil would still make the project profitable, because LNG (liquefied natural gas) prices usually move in tandem with the price oil, which Chevron estimated had increased by 80 percent between December 2009 and December 2012. However, the increased cost of the project was expected to significantly reduce its profitability. Some analysts estimated that if the price of Brent crude dropped below \$80 per barrel (U.S), the project would not be competitive with other energy sources and therefore be unprofitable.²⁷⁴ (The spot price of Brent crude was \$112.60, \$109.66 and \$90.65 per barrel during the first week of October 2012, 2013 and 2014, respectively.)

12/12/2013 - Chevron announced that the cost of the Gorgon LNG project increased a second time, from \$52 billion U.S. to \$54 billion U.S., bringing the total cost increases to \$17 billion. Chevron said that cost overruns and delays were the result of the high value of the Australian dollar, high Australian wages, low productivity, weather delays and the logistical challenges of building an LNG plant on Barrow Island (a Class A nature reserve). The secretary of the Western Australia Maritime Union of Australia (WAMUA), Christy Cain, claimed that "red

²⁷² Ibid

²⁷³ Ian Wilson, "Chevron's Gorgon Carbon Project on Track for Injection in 2015," *Bloomberg BusinessWeek* (October 23, 2012) <http://www.businessweek.com/news/2012-10-23/chevron-s-gorgon-carbon-project-on-track-for-injection-in-2015>

²⁷⁴ Matt Chambers, "Chevron ups cost estimate on Gorgon LNG project to \$52 billion," *The Australian*, (December 6, 2012) <http://www.theaustralian.com.au/business/mining-energy/chevron-ups-cost-estimate-on-gorgon-lng-project-to-52bn/story-e6frg9df-1226530997643>

tape” and waste were the reasons the cost of the project had increased. The Maritime Union also disputed Chevron's claims of low productivity among workers on the project and said workers were being unfairly blamed for the cost overruns. The Australian Mines and Metals Association (AMMA, a resources industry group) claimed that high wages in Australia were a major factor contributing to the cost over-runs.²⁷⁵

02/2014 - Former Labor Resources Minister and former union leader, Martin Ferguson, blamed the WAMUA (Western Australia Maritime Union of Australia) for the cost overruns and delays to the Gorgon project.²⁷⁶ The WAMUA responded that the Australian Mines and Metals Association (AMMA) was unfairly blaming the WAMUA for problems on the Gorgon project, because the union had sought to negotiate a new Enterprise Bargaining Agreement for maritime workers working in the offshore oil and gas industry. WAMUA secretary, Christy Cain, said maritime workers were being used as scapegoats by Chevron Australia.²⁷⁷

03/12/2014 - The Associated Press and the Dow Jones Newswire reported that the Gorgon project was 78% complete and that two thirds of gas production was already committed to buyers. However, the start-up date for “first gas production” was revised from the middle of 2014 to the middle of 2015.²⁷⁸

08/01/2014 – Chevron reported that the Gorgon Project was 83% complete and that “first gas production” was still expected in the middle of 2015.²⁷⁹

08/25/2014 – Reuters reported that Chevron was finding it difficult to lock-in 20-year sales contracts for its Gorgon liquefied natural gas (LNG) export plant in Australia and commented that the high level of unsold LNG expected from the Gorgon field demonstrated that the shale

²⁷⁵ Kathryn Diss and Sue Lannin, “Chevron reveals second Gorgon gas project cost blowout,” (December 12, 2013) <http://www.abc.net.au/news/2013-12-12/gorgon-gas-project-cost-blowout/5151982>

²⁷⁶ Ibid

²⁷⁷ Maritime Union of Australia, “Global campaign to target Chevron over Gorgon delays and overruns,” (April 9, 2014) <http://www.mua.org.au/news-story/3852/>

²⁷⁸ The Australian, “Chevron’s Gorgon Project 78% Complete,” (March 12, 2014) <http://www.theaustralian.com.au/business/latest/chevron-eyes-demand-growth/story-e6frg90f-1226852302166?nk=44368b41aa00c57e0356ec94a1c64a47>

²⁷⁹ Chevron, Gorgon Project Update, August 1, 2014, <http://www.chevron.com/media/gorgon/Gorgon-Progress-Update-08012014.pdf>

gas “boom” in the United States has significantly reduced the profitability of this project and other major LNG investments in Australia.²⁸⁰

01/07/2015 - As of January 7, 2015 the spot price of Brent crude oil was trading at \$49.92 per barrel, well below the breakeven point of \$80 per barrel referenced above.²⁸¹

Case Analysis

A project in which the original cost estimate was overrun by \$17 billion dollars (46%) might be expected to give rise to considerable litigation, as each party tried to recoup its position under the provisions of a stabilization or equilibrium clause in one or more contracts. For example, the value of the Australian dollar increased from 1.3996 Australian dollars per U.S. dollar in April 2009 to .9328 Australian dollars per U.S. dollar in July 2011 which made it more expensive for Chevron and its subcontractors to pay for locally sourced equipment, services and labor. (The increase in the value of the Australian dollar was driven by strong demand for Australian raw material exports, including iron ore and coal to the rapidly growing economies of Asia.) The increased value of the Australian dollars persisted through August 2014, 1.0742 Australian dollars per U.S. dollar.

In addition, the approval of the third LNG unit was conditioned on the implementation of more costly environmental protection measures. Despite these adverse developments neither Chevron nor any of the other parties to the contract have sought compensation in the Australian courts. This is in part because the changed economic circumstances (strong demand for Australian coal and iron ore and appreciation of the Australian dollar) were not the result of a change in government policy, but rather the consequence of natural market developments; and because the decision to add a third LNG unit was Chevron’s idea not the Australian Government’s.

The only instance of apparent political manoeuvring involved the disagreement over the relative importance of labour costs in the project cost overruns. Chevron provided a balanced explanation for the cost overruns, but the Australian Mines and Metals Association (AMMA)

²⁸⁰ Reuters, “Struggling to lock in buyers, Chevron's Gorgon casts doubt on global LNG sales model”, August 25, 2014, <http://www.reuters.com/article/2014/08/25/chevron-lng-idUSL4N0QQ22X20140825>

²⁸¹ Anjali Raval, “Brent Crude Falls Under \$50 per Barrel”, Financial Times, January 7, 2015, <http://www.ft.com/cms/s/0/d04d5e86-9644-11e4-a40b-00144feabdc0.html#axzz3O9da8H3P>

and the Former Labour Resources Minister, Martin Ferguson blamed the WAMUA. It is not surprising that the AMMA would blame the cost overruns on the WAMUA, but it is surprising that a former labor resources minister and former union leader, serving in the government of Prime Minister, Julia Gillard (a member of the Labor Party) would blame the WAMUA. Chevron, for the most part, has remained above the fray, because the problems encountered during the project could not be solved by a court or tribunal.

7.3 Case 3 – The BTC Pipeline

The Caspian Sea lies above one of the world's largest group of oil and natural gas fields, but the sea is landlocked making the transportation of oil to Western markets complicated. During the Soviet era, all transportation routes from the Caspian region passed through Russia. However, the dissolution of the Soviet Union made it possible to consider alternative routes. The BTC pipeline follows one of those routes.²⁸²

The Baku-Tbilisi-Ceyhan (BTC) pipeline links Baku, Azerbaijan with the Turkish Mediterranean port city of Ceyhan. It is 1,100 miles long (1,768 kilometers), requires more than 100 surface stations, associated pumping facilities and plants to maintain the flow of oil, and can carry one million barrels of oil per day. The pipeline follows a winding path from Azerbaijan through Georgia to Turkey.²⁸³ The pipeline cost approximately \$3.7 billion.²⁸⁴

It was constructed by a consortium of companies led by BP and was financed with a high level of debt using a project financing structure. The BTC Company shareholders include BP (30.1 percent), Azerbaijan (BTC) Limited (AzBTC, 25.0 percent), Chevron (8.9 percent), Statoil (8.71 percent), *Türkiye Petrolleri Anonim Ortaklığı* (TPAO, 6.53 percent), Eni (5.0 percent), Total (5.0 percent), Itochu (3.4 percent), Inpex (2.5 percent), ConocoPhillips (2.5 percent) and ONGC (Oil and Natural Gas Company Limited, 2.36 percent).²⁸⁵ The pipeline was completed in May 2005. This case is included because of its size, its transit route through three countries any one of

²⁸² *Kommersant*, "Revolutions in the Pipeline", (May 25, 2005) <http://www.kommersant.com/page.asp?id=580345>

²⁸³ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. (Tulsa, OK: PennWell Corporation, 2011) p. 411

²⁸⁴ Baku-Tbilisi-Ceyhan (BTC) pipeline, <http://www.hydrocarbons-technology.com/projects/bp/>, Last accessed on January 11, 2015.

²⁸⁵ *Trend*, "Tankers Carrying Oil Delivered by BTC Pipeline Shipped from Turkey," April 21, 2014, <http://en.trend.az/capital/energy/2265951.html>

which could have interfered with the operation of the pipeline, and the number of partners in the project.

Timeline

Spring 1992 - The Turkish Prime Minister, Suleiman Demirel, proposed to Central Asian countries including Azerbaijan that the pipeline run through Turkey.

03/09/1993 - The first document related to the construction of the Baku–Tbilisi–Ceyhan pipeline was signed between Azerbaijan and Turkey on March 9, 1993 in Ankara, Turkey.²⁸⁶ The Turkish route necessitated that the pipeline from Azerbaijan run through Georgia or Armenia, but the route through Armenia was politically impossible because of the unresolved conflict between Armenia and Azerbaijan over the territorial status of Nagorno-Karabakh. This left the circuitous Azerbaijan-Georgia-Turkey route, which was longer and more expensive to build than a route through Armenia.²⁸⁷

10/29/1998 - The project gained momentum following the Ankara Declaration, signed on October 29, 1998 by the President of Azerbaijan, Heydar Aliyev; President of Georgia, Eduard Shevardnadze; President of Kazakhstan, Nursultan Nazarbayev; President of Turkey, Suleiman Demirel and President of Uzbekistan, Islam Karimov. The declaration was witnessed by the United States Secretary of Energy, Bill Richardson, who expressed strong support for the pipeline.²⁸⁸

11/18/1999 - The intergovernmental agreement in support of the pipeline was signed by Azerbaijan, Georgia, and Turkey during a meeting of the Organization for Security and Cooperation in Europe (OSCE) in Istanbul, Turkey.²⁸⁹

08/01/2002 - The Baku-Tbilisi-Ceyhan Pipeline Company (BTC Co.) was established in London

²⁸⁶ *Turkish Daily News*, "Timeline of the Baku-Tbilisi-Ceyhan Pipeline," (July 13, 2006)

<http://www.hurriyetdailynews.com/default.aspx?pageid=438&n=timeline-of-the-baku-tbilisi-ceyhan-pipeline-2006-07-13>

²⁸⁷ Zeyno Baran, "The Baku-Tbilisi-Ceyhan Pipeline: Implications for Turkey" (PDF), 103-118,

http://www.silkroadstudies.org/BTC_6.pdf

S. Frederick Starr and Svante E. Cornell, "The Baku-Tbilisi-Ceyhan Pipeline: Oil Window to the West," The Central Asia-Caucasus Institute, Silk Road Studies Program (2005) <http://www.silkroadstudies.org/BTC.pdf>

²⁸⁸ *Ibid*

²⁸⁹ *Ibid*

on August 1, 2002.

04/2003 - Construction began in April 2003. The Azerbaijan section was constructed by Consolidated Contractors International of Greece, and the Georgia section was constructed by a joint venture of France's *Spie Capag* and UK *Petrofac International*. The Turkish section was constructed by BOTAŞ Petroleum Pipeline Corporation. Bechtel Corporation was the general contractor for engineering, procurement and construction.²⁹⁰

02/2004 - Financing was agreed in February 2004, after more than two years of appraisal of the potential environmental and social impacts of the project. Approximately 70% of the project costs were funded by a group of lenders including the International Finance Corporation (IFC), the European Bank for Reconstruction and Development (EBRD), the export credit agencies of seven countries, and a syndicate of fifteen commercial banks.²⁹¹

05/10/2005 - The first oil began to flow on May 10, 2005 and reached Ceyhan, Turkey on May 28, 2006.²⁹²

03/2009 – In March 2009, the capacity of the BTC pipeline was increased to 1.2 million barrels per day.²⁹³

04/21/2014 - Since June 2006, 2,500 tankers carrying oil delivered via the Baku-Tbilisi-Ceyhan (BTC) pipeline have been shipped from the Turkish marine terminal in Ceyhan, carrying 1.9 billion barrels of oil (256 million tons).²⁹⁴

08/11/2014 – The BTC Pipeline shipped its 2 billionth barrel of oil.²⁹⁵

²⁹⁰ Alexander's Gas & Oil Connections, "Baku-Tbilisi-Ceyhan Pipeline Company Founded," (August 30, 2002) http://www.gasandoil.com/news/central_asia/06e64ce97241a092b52d5a35d6be6a60

²⁹¹ International Finance Corporation, *The Baku-Tbilisi-Ceyhan (BTC) Pipeline Project*, Lessons of Experience, September 2006, No. 2, IFC, World Bank Group, http://www.gcgf.org/wps/wcm/connect/d01d2180488556f0bb0cfb6a6515bb18/BTC_LOE_Final.pdf?MOD=AJPERE&CACHEID=d01d2180488556f0bb0cfb6a6515bb18

²⁹² BP, "BTC Celebrates Full Commissioning" (Press release) (July 13, 2006) <http://www.bp.com/en/global/corporate/press/press-releases/btc-celebrates-full-commissioning.html>

²⁹³ BP, Baku-Tbilisi-Ceyhan pipeline, http://www.bp.com/en_az/caspian/operationsprojects/pipelines/BTC.html, Last accessed on October 10, 2014

²⁹⁴ *Trend*, "Tankers Carrying Oil Delivered by BTC Pipeline Shipped from Turkey," April 21, 2014, <http://en.trend.az/capital/energy/2265951.html>

Case Analysis

The planning, design and construction of the Baku-Tbilisi-Ceyhan (BTC) pipeline had to overcome many political, social and environmental issues, but the sponsors of the project and the lenders were committed to achieving a sustainable arrangement and ensuring that the project was constructed and operated in accordance with international environmental and social standards.²⁹⁶

To achieve these objectives, several of the strategies discussed in Chapter 6 for managing the risk associated with large projects were employed. These include project financing using a high level of debt and the participation of numerous public and private financial organizations; numerous legal agreements designed to ensure continued cooperation between the parties in the consortium; multilateral agreements between host governments that stipulated that the provisions in the principal legal agreement and other legal agreements override the domestic law of any of the countries involved in the project; and the inclusion of eleven equity partners. All of this reduced the risk of unilateral action by one of the sponsors or host governments that could impede the shipment of oil or result in expropriation of the fields or the pipeline. There has not been a major disruption or dispute since the project began operation in 2005, proving that multilateral agreements can be effective and that parties to such agreements generally honor their commitments.

7.4 Case 4 – The Deepwater Horizon Drilling Rig

The Deepwater Horizon was an ultra-deep-water, offshore oil drilling rig owned by Transocean. The rig was built in 2001 in South Korea by Hyundai Heavy Industries, was commissioned by R&B Falcon (which later became part of Transocean), was registered in Majuro, Marshall Islands, and was leased to British Petroleum (BP) from 2001 until September 2013. In September 2009, the rig drilled the deepest oil well in history at a vertical depth of 35,050 feet

²⁹⁵ BP, Baku-Tbilisi-Ceyhan pipeline, http://www.bp.com/en_az/caspian/operationsprojects/pipelines/BTC.html, Last accessed on October 10, 2014

²⁹⁶ International Finance Corporation, *The Baku-Tbilisi-Ceyhan (BTC) Pipeline Project*, Lessons of Experience, September 2006, No. 2, IFC, World Bank Group, http://www.gcgf.org/wps/wcm/connect/d01d2180488556f0bb0cfb6a6515bb18/BTC_LOE_Final.pdf?MOD=AJPERE&CACHEID=d01d2180488556f0bb0cfb6a6515bb18

(10,683 meters), approximately 250 miles (400 km) southeast of Houston, in 4,132 feet (1,259 meters) of water.²⁹⁷

On April 20, 2010, while drilling at the *Macondo* Prospect, an explosion on the rig caused by a blowout, killed 11 crewmen and ignited a fire which was visible from 35 miles away (56 km). The fire could not be extinguished and, on April 22, 2010, the Deepwater Horizon sank, leaving the well discharging oil and natural gas at the seafloor for 87 days, until it was successfully capped on July 15, 2010; making it the largest offshore oil spill in U.S. history.²⁹⁸ The U.S. government estimated the total discharge of oil at 4.9 million barrels (210 million U.S. gallons).²⁹⁹

Civil and criminal legal actions resulting from the loss of the Deepwater Horizon and the oil spill began shortly after the explosion, including a large number of individual and class action claims, which continued into 2014. Many claims were resolved administratively from a fund set up by BP for that purpose. The civil trial brought by the U.S. government began in early 2013 and was split into three phases, one to assign blame for the disaster, a second to determine how much oil spilled, and a final phase to set penalties for BP and Anadarko Petroleum Corp., its partner in the failed well.³⁰⁰ This case is important because of its size and because it illustrates the operation of environmental liability law and the role of the courts in calculating damages and apportioning blame.

²⁹⁷ Transocean, "Transocean's Ultra-Deepwater Semisubmersible Rig Deepwater Horizon Drills World's Deepest Oil and Gas Well", Transocean (September 2, 2009) <http://globenewswire.com/news-release/2009/09/02/403900/172461/en/Photo-Release-Transocean-s-Ultra-Deepwater-Semisubmersible-Rig-Deepwater-Horizon-Drills-World-s-Deepest-Oil-and-Gas-Well.html>

²⁹⁸ Guy Crittenden, "Understanding the Initial Deepwater Horizon Fire", *HazMat Management*. (May 10, 2010) <http://www.hazmatmag.com/news/understanding-the-initial-deepwater-horizon-fire/1000370689/?&er=NA>; USA Today, "Gulf Oil Spill Now Largest Offshore Spill in History as BP Continues Plug Effort", (May 27, 2010) <http://www.cacoastkeeper.org/news/gulf-oil-spill-now-largest-in-us-history-as-bp-continues-plug-effort>

²⁹⁹ U.S. Coast Guard, "On Scene Coordinator Report on Deepwater Horizon Oil Spill," (September 2011) http://www.uscg.mil/foia/docs/dwh/fosc_dwh_report.pdf

³⁰⁰ Jennifer Larino, "Federal Judge Rejects BP's bid to lower \$13.7 billion Oil Spill Fine", NOLA.com; Times-Picayune, February 19, 2015, http://www.nola.com/business/index.ssf/2015/02/bp_loses_bid_to_cap_oil_spill.html

Timeline

04/20/2010, 9:56 pm – Gas, oil and concrete from the *Deepwater Horizon* exploded up the wellbore onto the deck of the drilling platform and caught fire. The explosion killed 11 platform workers and injured 17 others; another 98 survived without serious physical injury.³⁰¹

04/22/2010, 10:21 am – The Deepwater Horizon rig sank.³⁰²

04/24/2010 - BP reported a leak of approximately 1,000 barrels per day (42,000 U.S. gallons per day).³⁰³

04/26/2010 – An oil slick was reported 36 miles (58 km) southeast of Louisiana. Booms were set up to keep the oil from washing ashore.³⁰⁴

04/27/2010 - The oil slick expanded to 100 miles (160 km) across and 20 miles (32 km) from the Louisiana coast.

04/28/2010 - the National Oceanic and Atmospheric Administration estimated that the leak was likely to be 5,000 barrels per day (210,000 U.S. gallons per day), five times larger than initially estimated by BP.^{305 306}

04/30/2010 – Oil washed ashore at Venice, Louisiana.

05/09/2010 – Tar balls were reported on Dauphin Island in Alabama.

05/13/2010 – Tony Hayward called the oil spill "relatively tiny" in comparison with the size of the "ocean".³⁰⁷

³⁰¹ William Welch and Chris Joyner, "Memorial Services Honors 11 Dead Oil Rig Workers," *USA Today* (May 25, 2010). http://usatoday30.usatoday.com/news/nation/2010-05-25-oil-spill-victims-memorial_N.htm

³⁰² CNN, "Oil Slick Spreads from Sunken Rig," (*video interview*) (April 22, 2010) <http://www.cnn.com/2010/US/04/22/oil.rig.explosion/>

³⁰³ CBC News, "Oil Rig Wreck Leaks into Gulf of Mexico," Associated Press (April 25, 2010) <http://www.cbc.ca/news/world/oil-rig-wreck-leaks-into-gulf-of-mexico-1.911697>

³⁰⁴ David Barstow, David Rohde and Stephanie Saul, "Deepwater Horizon Rig Disaster," *The Wall Street Journal*. (December 25, 2010) <http://www.nytimes.com/2010/12/26/us/26spill.html?pagewanted=all>

³⁰⁵ Associated Press, "Coast Guard New Oil Leak from Area Where Rig Exploded, Sank in Gulf; Spill Heads to Coast (online video) (April 28, 2010) <http://www.youtube.com/watch?v=WhUjq7IlzY>

³⁰⁶ BBC News, "US Military Joins Gulf of Mexico Oil Spill Effort," (April 29, 2010) <http://news.bbc.co.uk/2/hi/americas/8651624.stm>

05/13/2010 Transocean (a Swiss company and owner of the Deepwater Horizon drilling rig) filed in the U.S. District Court for the Southern District of Texas to limit its liability under the Limitation of Ship Owner's Liability Act to only its interest in the *Deepwater Horizon* which it valued at \$26.8 million.³⁰⁸

05/19/2010 – Oil washed ashore on mainland Louisiana.³⁰⁹

05/27/2010 (1) President Obama announced a six-month moratorium on new deep water oil drilling permits, that is, in 500 feet (150 m) of water or more.^{310 311}

(2) BP Plc and Transocean Ltd. faced at least 36 lawsuits, including group cases with potentially thousands of plaintiffs, over environmental damage and personal injuries caused by the oil spill.³¹²

06/01/2010 – Oil washed up on the beaches of Gulf Islands National Seashore.³¹³

06/04/2010 – Tar balls arrived on beaches in Pensacola, Florida.³¹⁴

06/11/2010 – Flow Rate Technical Group, a consulting firm, estimated that the leak could be 20,000 to 40,000 barrels per day (840,000 to 1,680,000 U.S. gallons per day).³¹⁵

³⁰⁷ Tim Webb, "BP Boss Admits Job on the Line over Gulf Oil Spill" *The Guardian*, (May 13, 2010)

<http://www.theguardian.com/business/2010/may/13/bp-boss-admits-mistakes-gulf-oil-spill>

³⁰⁸ Market Wired, "Transocean Ltd. Affiliates File Limitation of Liability Petition" (Press release), Transocean (May 13, 2010) <http://www.marketwired.com/press-release/transocean-ltd-affiliates-file-limitation-of-liability-petition-nyse-rig-1259747.htm>

³⁰⁹ Wall Street Journal, "Deepwater Horizon Rig Disaster" (May 19, 2010)

<http://online.wsj.com/news/articles/SB10001424052748704302304575213883555525958>

³¹⁰ Loren Steffy, "New Estimates on Offshore Drilling Ban Costs," *Houston Chronicle*, (June 2, 2010)

<http://blog.chron.com/lorensteffy/2010/06/new-estimates-on-offshore-drilling-ban-costs/>

³¹¹ CBS News, "Obama Extends Moratorium on Offshore Drilling," (May 27, 2010)

<http://www.cbsnews.com/news/obama-extends-moratorium-on-offshore-drilling/>

³¹² Bloomberg News, "BP, Transocean Lawsuits Surge as Oil Spill Spreads in Gulf," (May 1, 2010)

<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=afgkFlcmKJwU>

³¹³ National Park Service, "Response to Oil on Gulf Island Beaches Continues," (Press release) (June 4, 2010)

<http://www.nps.gov/aboutus/oil-spill-response.htm>

³¹⁴ Jane Ross, "Florida Coast Suffers First Impact from Oil Spill," *Reuters* (June 4, 2010)

<http://www.reuters.com/article/2010/06/04/us-oil-spill-florida-idUSTRE6533S820100604>

³¹⁵ Jessica Resnick-Ault, "BP Oil-Leak Estimate Doubled by U.S. Science Panel (Correct)", *BusinessWeek* (June 11, 2010) <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a0uIOsekfLlO>

06/16/2010 – President Obama met with BP executives, during which BP agreed to fund a \$20 billion escrow account administered by Kenneth Feinberg.³¹⁶

06/23/2010 – Oil appeared on Pensacola Beach and in Gulf Islands National Seashore, and officials warned against swimming for 33 miles (53 km) east of the Alabama line.³¹⁷

07/15/2010 – The well was capped on July 15, 2010.

08/10/2010 – Seventy-seven cases, including those brought by state governments, individuals, and companies, in the U.S. District Court for the Eastern District of Louisiana were combined under Multi-District Litigation docket MDL No. 2179, captioned *In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010*, presided over by U.S. District Judge Carl Barbier.^{318 319}

09/19/2010 – BP officially declared the oil well completely and permanently sealed.³²⁰

12/15/2010 –The U.S. federal government sued BP Exploration and Production, Inc., and eight other corporations for unlimited liability, to pay the expenses involved in the cleanup and environmental recovery from the spill. It also sought civil penalties under the Clean Water Act (see entry for December 15, 2010 below).

12/15/2010 - The U.S. Department of Justice filed a civil suit against BP and other defendants for violations of the Clean Water Act in the U.S. District Court for the Eastern District of Louisiana, this case was subsequently consolidated with the other cases³²¹ which were captioned *United States of America v. BP Exploration & Production Inc. et al., Civ. Action No. 2:10-cv-04536*.³²²

³¹⁶ Jonathan Weisman and Guy Chazan "BP Halts Dividend, Agrees to \$20 Billion Fund for Victims," *The Wall Street Journal*, (June 17, 2010) <http://online.wsj.com/news/articles/SB10001424052748704198004575310571698602094>

³¹⁷ Michael Kunzelman, "Oil Spewing Once Again in the Gulf," *Myrtle Beach News Online Associated Press* (June 24, 2010) <http://www.myrtlebeachonline.com/2010/06/24/1550150/oil-spewing-once-again-in-the.html>

³¹⁸ Environmental Law Institute, *Deepwater Horizon Oil Spill Litigation Database*, <http://www.eli.org/deepwater-horizon>

³¹⁹ MDL No. 2179 Oil Spill by the Oil Rig "DeepWater Horizon", (August 10, 2010) <http://www.laed.uscourts.gov/OilSpill/OilSpill.htm>

³²⁰ Los Angeles Times, "BP Blown-Out Well Finally Killed at Bottom of Gulf of Mexico," (September 19, 2010) <http://latimesblogs.latimes.com/greenspace/2010/09/blown-out-bp-well-finally-killed-at-bottom-of-gulf-of-mexico.html>

04/21/2011 - BP filed \$40 billion in lawsuits against rig owner Transocean, cement contractor Halliburton and blowout preventer manufacturer Cameron International Corporation. BP alleged that failed safety systems and irresponsible behavior of the contractors had led to the explosion.³²³

03/02/2012 - BP settled with most private plaintiffs in March 2012, just before its trial on liability for the oil spill began. BP initially estimated the cost of the settlement at \$7.8 billion. In a subsequent regulatory filing, it revised the cost of the settlement to \$9.2 billion.³²⁴

08/13/2012 - BP asked U.S. District Judge Carl Barbier to approve the settlement, claiming its actions "did not constitute gross negligence or willful misconduct".^{325 326} (Under the Oil Pollution Act of 1990, a company is only liable for \$75 million in economic damages, provided it did not exhibit "gross negligence"; the U.S. federal government is required by law to pay the next \$1 billion in claims.)³²⁷

08/31/2012 - In response to BP's filing; and in order to ensure that BP could not use its filing and any possible acceptance of the settlement to escape a judgment of gross negligence,³²⁸ the U.S. Department of Justice (DOJ) filed papers describing the spill as an example of "gross negligence and willful misconduct".^{329 330} (A ruling of gross negligence would result in a four-fold increase

³²¹ U.S. Department of Justice United States of America v. BP Exploration & Production Inc. et al., Civ. Action No. 2:10-cv-04536, *United States District Court - Eastern District of Louisiana*,

http://www.law.uh.edu/faculty/thester/courses/Environmental-Practicum-2014/BP_MOEX_CD_FINAL.pdf

³²² John Wyeth Griggs, "BP Gulf of Mexico Spill Energy" *Law Journal* Vol. 32:57-79 (2011)

http://felj.org/sites/default/files/docs/elj321/14_57_bp_gulf_of_mexico.pdf

³²³ Leo King, "BP £24 billion Lawsuits Claim Contractors Failed to use Modelling Software Properly,"

Computerworld, UK (April 21, 2011) <http://www.computerworlduk.com/news/it-business/3275978/bp-24bn-lawsuits-claim-contractors-failed-to-use-modelling-software-properly/>

³²⁴ Laurel Brubaker Calkins and Jeff Feeley, *Insurance Journal*, (March 3, 2014),

<http://www.insurancejournal.com/news/national/2014/03/03/322103.htm>

³²⁵ United States District Court – Eastern District of Louisiana, <http://www.stuarthsmith.com/wp-content/uploads/2012/09/7229-2.pdf>

³²⁶ David Ingram, "Deepwater Horizon: U.S. Ramps up Rhetoric on BP over Oil Spill," *Reuters* (September 4, 2012)

<http://www.theguardian.com/business/2012/sep/05/deepwater-horizon-us-bp-oil-spill>

³²⁷ Sam Stein, "BP's Influence Peddling Bears Fruit in Congress," *Huffington Post*, (March 12, 2012)

<http://www.theguardian.com/business/2012/sep/05/deepwater-horizon-us-bp-oil-spill>

³²⁸ Sam Stein, "BP's Influence Peddling Bears Fruit In Congress," *Huffington Post* (12 March 2012)

http://www.huffingtonpost.com/2012/03/12/bp-oil-spill-gulf-of-mexico-oil-lobbyists_n_1335556.html

³²⁹ CNN, "DOJ Accuses BP of 'Gross Negligence' in Gulf Oil Spill," (September 5, 2012)

<http://money.cnn.com/2012/09/05/news/companies/bp-oil-spill/>

in the penalties under the Clean Water Act, which would increase the penalties to approximately \$17.6 billion, and would increase damages in the other suits as well.)^{331 332 333}

11/14/2012 - BP agreed to pay \$4.5 billion in fines and other payments, the largest of its kind in U.S. history. BP also agreed to plead guilty to 11 felony counts related to the deaths of the 11 workers.^{334 335} The Justice Department had previously filed criminal charges against one BP employee in April 2012 and against three BP employees in November 2012.^{336 337} Two of the employees were indicted on manslaughter charges for acting negligently in their supervision of key safety tests performed on the rig prior to the explosion and failure to alert onshore engineers of problems with the drilling operation;³³⁸ and two employees were charged with obstruction of justice and for lying to federal investigators, one was later found guilty.^{339 340 341}

³³⁰ Mira Oberman, "BP vows to 'vigorously defend' itself at US oil spill trial," *Agence France-Press* (19 February 2013) <http://www.globalpost.com/dispatch/news/afp/130219/bp-vows-vigorously-defend-itself-at-us-oil-spill-trial>

³³¹ Richard Thompson, "BP oil spill trial continues as demonstrators note upcoming 3-year anniversary of disaster," *NOLA.com and The Times-Picayune* (April 16, 2013) http://www.nola.com/news/gulf-oil-spill/index.ssf/2013/04/bp_oil_spill_draws_demonstrato.html

³³² Deon Daugherty, "Judge dismisses latest BP injunction in oil spill settlement Dispute," *Houston Business Journal* (April 5, 2013) <http://www.bizjournals.com/houston/news/2013/04/05/federal-judge-dismisses-bp-injunction.html>

³³³ Andrew Callus and Braden Reddall, "U.S. judge accepts BP collected 810,000 barrels in spill," *Reuters* (February 20, 2013) <http://www.reuters.com/article/2013/02/20/us-bp-spill-barrels-idUSBRE91J06120130220>

³³⁴ Paul Waldie, "BP turned to Wikipedia to estimate size of spill, U.S. alleges," *The Globe and Mail* (Toronto) (November 15, 2012) <http://archive.today/ESugm>

³³⁵ Clifford Krauss and John Schwartz, "BP Will Plead Guilty and Pay Over \$4 Billion," *The New York Times*, http://www.nytimes.com/2012/11/16/business/global/16iht-bp16.html?pagewanted=all&_r=0

³³⁶ Suzanne Goldenberg and Dominic Rushe, "BP to pay \$4.5bn Penalty over Deepwater Horizon Disaster". *The Guardian* (London) (November 15, 2012) <http://www.theguardian.com/environment/2012/nov/15/bp-deepwater-horizon-gulf-oil-spill>

³³⁷ Eyder Peralta, "Government Files First Criminal Charges in BP Oil Spill," *NPR* (April 24, 2012) <http://www.npr.org/blogs/thetwo-way/2012/04/24/151284311/first-criminals-charges-in-bp-oil-spill-filed-against-a-bp-engineer>

³³⁸ Suzanne Goldenberg and Dominic Rushe, "BP to pay \$4.5bn Penalty over Deepwater Horizon Disaster". *The Guardian* (London) (November 15, 2012) <http://www.theguardian.com/environment/2012/nov/15/bp-deepwater-horizon-gulf-oil-spill>

³³⁹ Paul Waldie, "BP turned to Wikipedia to estimate size of spill, U.S. alleges," *The Globe and Mail* (Toronto) (November 15, 2012) <http://archive.today/ESugm>

³⁴⁰ Eyder Peralta, "Government Files First Criminal Charges in BP Oil Spill," *NPR* (April 24, 2012) <http://www.npr.org/blogs/thetwo-way/2012/04/24/151284311/first-criminals-charges-in-bp-oil-spill-filed-against-a-bp-engineer>

³⁴¹ John Rudolf, "Kurt Mix, BP Engineer, Faces First Oil Spill Charges". *Huffington Post*. (24 April 2012) http://www.huffingtonpost.com/2012/04/24/kurt-mix-bp-engineer-oil-spill_n_1449316.html

01/03/2013 - The U.S. Justice of Department announced that "Transocean Deepwater, Inc. agreed to plead guilty to violating the Clean Water Act and to pay a total of \$1.4 billion in civil and criminal fines and penalties".³⁴²

01/13/2013 - Judge Barbier approved the medical-benefits portion of BP's proposed \$7.8 billion partial settlement (subsequently revised to \$9.2 billion). People living at least 60 days along the shores affected or involved in the clean-up, who could document one or more specific health conditions caused by the oil or dispersants were eligible for benefits.³⁴³

02/25/2013 - BP and its partners (Transocean and Halliburton) went on trial in the United States District Court for the Eastern District of Louisiana in New Orleans to determine payouts and fines under the Clean Water Act and the Natural Resources Damage Assessment. The trial's first phase was to determine the liability of BP, Transocean, Halliburton, and other companies, and to determine whether the companies acted with gross negligence and willful misconduct.^{344 345}

07/09/2013 - BP reported that it had spent approximately \$25 billion on the Gulf Oil Spill, however, this did not include the \$4.5 billion that was owed to the U.S. Government as the result of a settlement between BP and the U.S. Department of Justice for fines and penalties for violation of the Clean Water Act (see entry on November 14, 2012 above).³⁴⁶

09/30/2013 - The second phase of the trial of BP and its partners focused on how much oil spilled into the Gulf of Mexico and who was responsible for stopping it.³⁴⁷ Claims against BP's

³⁴² U.S. Environmental Protection Agency, "Transocean Agrees to Plead Guilty to Environmental Crime and Enter Civil Settlement to Resolve U.S. Clean Water Act Penalty Claims from Deepwater Horizon Incident," (January 3, 2013) <http://yosemite.epa.gov/opa/admpress.nsf/2467feca60368729852573590040443d/ea4c5daf4e864d6985257ae80062d9ab!OpenDocument>

³⁴³ Richard Thompson, "Federal judge approves BP Gulf oil spill medical settlement," *The Times-Picayune* (January 11, 2013). http://www.nola.com/business/index.ssf/2013/01/federal_judge_approves_bp_gulf.html

³⁴⁴ Katherine Schmidt, "Macondo trial gets under way". *Upstream Online* (NHST Media Group) (February 25, 2013) <http://www.upstreamonline.com/live/article1318253.ece>

³⁴⁵ Jef Feeley, Jef and Allen Johnson, Jr., "BP, Transocean Accused of 'Reckless' Actions in Spill," *Bloomberg*, Allen (February 26, 2013). <http://www.bloomberg.com/news/2013-02-25/bp-oil-spill-errors-trial-begins-in-new-orleans-court.html>

³⁴⁶ Murrey Jacobson, "By the Numbers: The Oil Spill and BP's Legal Troubles," *PBS News Hour, the Rundown*, (July 9, 2013) <http://www.pbs.org/newshour/rundown/gulf-oil-spill-by-the-numbers/>

³⁴⁷ Clifford Krauss, "In BP Trial, the Amount of Oil Lost Is at Issue," *New York Times* (September 29, 2013) <http://www.nytimes.com/2013/09/30/business/energy-environment/bp-trial-in-2nd-phase-to-set-amount-of-oil-spilled.html?pagewanted=all>

drilling fluids contractor M-I LLC were dismissed by U.S. District Judge Carl Barbier during the second phase of the trial, and the judge also ruled out punitive damages against Cameron International, the manufacturer of the blowout preventer on the Deepwater Horizon rig.³⁴⁸

10/2013 – The payment of claims by BP’s claims administrator was placed on hold after BP filed an appeal with the 5th Circuit of appeals regarding the \$9.2 billion settlement BP had signed in March 2012.

11/25/2013 - BP argued before the Texas Supreme Court that it should be covered by a \$750 million insurance policy taken out by Transocean Ltd., the Deepwater Horizon rig’s owner, prior to the spill.³⁴⁹

12/17/2013 - By December 2013, BP had paid almost \$13 billion in claims to businesses, individuals and federal and state governments.³⁵⁰

02/09/2014 - As of February 9, 2014, BP had sold \$38 billion in assets, including half of all its offshore platforms and refineries, to pay a projected total of \$42 billion for the clean-up, compensation to businesses and individuals and other costs associated with the spill.³⁵¹

03/04/2014 – BP was told by a panel of the U.S. Fifth Circuit Court of Appeals that it must abide by the terms of a \$9.2 billion settlement with victims of the Deepwater Horizon oil spill, after BP failed to satisfy judges that a claims administrator was misinterpreting the agreement and was paying claims that BP described as “fictitious” and “absurd”.³⁵²

³⁴⁸ Michael Kunzelman, "Claims against BP contractors dismissed at trial," *The Associated Press*. (20 March 2013) <http://bigstory.ap.org/article/plaintiffs-rest-trial-over-2010-gulf-oil-spill> Retrieved 13 April 2013

³⁴⁹ Insurance Business, "BP: Insurance policy should cover us for Gulf oil spill," (November 25, 2013) <http://www.ibamag.com/news/bp-insurance-policy-should-cover-us-for-gulf-oil-spill-16271.aspx>

³⁵⁰ John Schwartz, "BP Accuses Texas Lawyer of 'Brazen Fraud' in Workers' Claims Over Gulf Oil Spill," *The New York Times*, (December 17, 2013) http://www.nytimes.com/2013/12/18/us/bp-accuses-texas-lawyer-of-brazen-fraud-in-workers-claims-over-gulf-oil-spill.html?_r=0

³⁵¹ The Economist, "A Shrunken Giant," (February 8, 2014) <http://www.economist.com/news/business/21595935-british-oil-company-safer-smaller-sadder-and-wiser-its-disaster-gulf>

³⁵² Laurel Calkins and Jef Feeley, "BP Must Live with \$9.2 Billion Oil-Spill Deal, Court Says," *Bloomberg News*, March 4, 2014, <http://www.bloomberg.com/news/2014-03-04/bp-must-live-with-oil-spill-settlement-terms-court-rules-1.html>

04/20/2014 - BP refused to pay a \$148 million bill for U.S. government studies related to the 2010 oil spill, including research into its impact on dolphins, whales and oysters; and published figures indicated that BP had reduced its spending on the Natural Resource Damage Assessment (NRDA). Still, at the end of 2012, BP had paid \$973 million for NRDA studies, and by April 2014 it estimated it had paid \$1 billion pursuant to the NRDA.³⁵³

05/19/2014 - A federal appeals court refused to reconsider its previous ruling that businesses did not have to prove they were directly harmed by BP's 2010 Deepwater Horizon oil spill to receive settlement payments.³⁵⁴

06/09/2014 - The U.S. Supreme Court declined a request from BP to block payments to businesses while it appealed the district and appeals courts' interpretation of the \$9.2 billion settlement. The decision upheld the ruling by the U.S. 5th Circuit Court of Appeals in New Orleans that under terms of the settlement, businesses claiming damages from the oil spill did not have to prove direct harm.³⁵⁵

09/02/14 - Halliburton Co. announced it had reached a \$1.1 billion agreement that it said would settle most of the class action claims asserted by plaintiffs against the company following the Deepwater Horizon oil spill in the Gulf of Mexico. The proposed settlement, which was still subject to the U.S. District Court for Eastern Louisiana's approval and an agreed-upon participation level by current claimants, would be paid into a trust fund until all appeals have been resolved in three installments over the next two years. The company previously had taken a \$1.3 billion contingency loss for the Deepwater Horizon lawsuits in multiple districts. Halliburton said it would withdraw the proposed settlement if not enough claimants agreed to accept it.³⁵⁶

³⁵³ Ed Crooks, "BP Refuses to Fund Gulf Oil Spill Studies," *Reuters* (April 20, 2014)

<http://www.ft.com/intl/cms/s/0/cdf8ba8c-c8a3-11e3-8976-00144feabdc0.html#axzz31WtwsjmY>

³⁵⁴ The Times-Picayune, "Appeals Court will not re-hear BP Settlement Issue," *Associated Press* (May 19, 2014)

http://www.nola.com/environment/index.ssf/2014/05/appeals_court_wont_rehear_bp_s.html

³⁵⁵ Kathryn Sayre, "U.S. refuses for now, to stop, BP Oil Spill Payments," *The Times Picayune* (June 9, 2014)

http://www.nola.com/business/index.ssf/2014/06/supreme_court_refuses_to_stop.html

³⁵⁶ Nick Snow, Halliburton Announces \$1.1 Billion Macondo Claims Agreement, *Oil & Gas Journal* (September 3, 2014) <http://www.ogj.com/articles/2014/09/halliburton-announces-1-1-billion-macondo-claims-agreement.html>

09/04/2014 - U.S. District Judge Barbier ruled that BP was guilty of “gross negligence and willful misconduct” under the Clean Water Act. He described BP's actions as "reckless", and Transocean's and Halliburton's actions as "negligent." He apportioned 67% of the blame for the spill to BP, 30% to Transocean, and 3% to Halliburton. Fines would be apportioned commensurate with the degree of negligence of the parties and the number of barrels of oil spilled. (Under the Clean Water Act fines can be based on a cost per barrel of up to \$4,300 at the discretion of the judge. The number of barrels was in dispute at the conclusion of the trial. BP argued that 2.5 million barrels were spilled over the 87 days, but the U.S. government and the court contend 4.2 million barrels were spilled.³⁵⁷ This decision could potentially quadruple the fines and penalties for violating the Clean Water Act to \$18.1 billion (4,200,000 barrels x \$4,300 per barrel = \$18.1 billion).³⁵⁸ This ruling would increase BP's total cost for the Deepwater Horizon oil spill well beyond the \$43 billion it has already provided for.³⁵⁹ BP issued a statement strongly disagreeing with the court's ruling and immediately filed an appeal.

10/03/2014 - BP asked Judge Carl Barbier for a new judgment or retrial in the 'gross negligence' suit, claiming that the verdict allegedly relied on evidence that had been excluded from court.³⁶⁰

12/08/2014 – The U.S. Supreme Court refused to hear BP's appeal that some businesses were receiving payouts despite being unable to trace their losses to the effects of the BP oil spill. The U.S. Supreme court's refusal to hear BP's appeal meant that BP would have to make the payments.³⁶¹

³⁵⁷ The New Orleans Sun, BP Found “grossly negligent” in Gulf of Mexico Oil Spill, September 2, 2014, <http://www.neworleanssun.com/index.php/sid/225407625>

³⁵⁸ Forbes, BP 'Grossly Negligent' In Gulf Spill, Eyes \$18 Billion Penalty--And Tax Deduction, September 4, 2014, <http://www.forbes.com/sites/robertwood/2014/09/05/bp-grossly-negligent-in-gulf-spill-eyes-18-billion-penalty-and-tax-deduction/>

³⁵⁹ Katherine Rushton and Emily Gosden, “Reckless' oil giant could face up to \$18bn in Clean Water Act fines for 2010 disaster after judge's ruling, which sends shares down 6pc”, The Telegraph, September 4, 2014, <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/11075316/BP-faces-up-to-18bn-fines-after-Gulf-of-Mexico-gross-negligence-ruling.html>BP faces up to \$18bn fines after Gulf of Mexico 'gross negligence' ruling

³⁶⁰ Katherine Rushton, “BP Calls for Trial in Deep Water Horizon Case”, The Telegraph, October 3, 2014, <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/11139068/BP-calls-for-retrial-of-Deepwater-Horizon-case.html>

³⁶¹ Reuters, “US Supreme Court rejects BP challenge to Gulf spill settlement”, The Telegraph, December 8, 2014, <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/11280306/US-Supreme-Court-rejects-BP-challenge-to-Gulf-spill-settlement.html>

02/19/2015 - U.S. District Judge Carl Barbier ruled that BP could pay a maximum civil penalty of up to \$4,300 for each barrel of oil spilled under the Clean Water Act. He rejected BP's argument that the fines should be capped at \$9.57 billion, approximately one-third lower than the \$13.7 billion penalty federal prosecutors are seeking. At the time of this writing, the court had not yet ruled how much BP will pay in fines and penalties for the oil spill.³⁶²

Case Analysis

This case exhibits several of the features observed in Chapter 6 related to the management of risk in the international oil and gas industry. First, there is no evidence that the British government tried to intervene at any time on BP's behalf, supporting the observation that national governments do not intervene on behalf of investors involved in a dispute arising from foreign direct investment.

Second, international oil and gas companies are likely to use the domestic courts of the host country before resorting to international courts or tribunals, if the courts are thought to be reliable and fair (see actions initiated by BP on April 21, 2011; March 2, 2012; August 13, 2012; October 2013; November 25, 2013; April 20, 2014; June 9, 2014, September 4, 2014 and October 3, 2014 above). BP's decision to use the U.S. court system to protect its interests and minimize its liability was probably made easier by the fact that in the United States the Rule of Law is rated 91, indicating a high level of fairness and reliability. (However, the ICSID does not require that domestic court remedies be exhausted before filing a claim with the ICSID.)

Third, like most international oil and gas companies BP chose to self-insure against expropriation and liability rather than purchase insurance against the potential risk of either. BP has some insurance through Lloyd's of London, as well as through its captive insurance company, Jupiter Insurance Ltd, which has already set loss reserves at its policy limit maximum of \$700 million.³⁶³ In November 2013, BP argued that it should be covered by a \$750 million

³⁶² Jennifer Larino, "Federal Judge Rejects BP's bid to lower \$13.7 billion Oil Spill Fine", NOLA.com; Times-Picayune, February 19, 2015, http://www.nola.com/business/index.ssf/2015/02/bp_loses_bid_to_cap_oil_spill.html

³⁶³ Derek A. Jones and Jason B. Kurtz, "Deepwater Horizon: Torrent of oil, flood of insurance issues" July 23, 2010, <http://www.milliman.com/insight/pc/Deepwater-Horizon-Torrent-of-oil--flood-of-insurance-issues/>

policy taken out by the rig owner, Transocean.³⁶⁴ Losses above these amounts have been borne by BP. The cost to BP is reflected in its sale of \$38 billion in assets to cover the cost of the spill.

7.5 Case 5 – Expropriation of Oil and Gas Assets in Venezuela and Argentina

Venezuela

Venezuela nationalized its oil and gas industry in the 1970s, creating the country's state-owned oil and natural gas company, *Petroleos de Venezuela S.A.* (PDVSA). However, during the mid-1990s, PDVSA implemented a policy referred to as the *Apertura Petrolera* (oil opening), which was intended to mobilize the capital, technology and managerial capabilities of international oil companies in order to maximize the production of crude oil in Venezuela and simultaneously reduce the government revenue needed to finance oil and gas exploration and development in the country.³⁶⁵

The “flagship” projects of the *Apertura* were four large projects dedicated to the production, upgrading (i.e. partial refining) and marketing of extra-heavy crude oil from the Orinoco Oil Belt (OOB), a large reservoir with an estimated one trillion barrels of heavy (dense and highly viscous) crude oil. Three of these projects (*Petrozuata, Hamaca and Cerro Negro*) are at the center of the arbitration proceedings that ConocoPhillips (COP) and ExxonMobil (XOM) brought against Venezuela at the International Centre for Settlement of Investment Disputes (ICSID) in late 2007 in response to Venezuela’s nationalization of ConocoPhillips and ExxonMobil’s assets in Venezuela.³⁶⁶ This case illustrates the impact of political and ideological change on the security of investor ownership rights, the operation of the ICSID and the options available to claimants and defendants involved in investment disputes.

Timeline

12/06/1998 - Hugo Chavez, the presidential candidate of the Fifth Republic Movement/United Socialist Party, ran on an anti-corruption and anti-poverty platform and was elected president of

³⁶⁴ Insurance Business, “BP: Insurance Policy Should Cover us For Gulf Oil Spill” (November 25, 2013) <http://www.ibamag.com/news/bp-insurance-policy-should-cover-us-for-gulf-oil-spill-16271.aspx>

³⁶⁵ Juan Carlos Boue, “ConocoPhillips and ExxonMobil v. Venezuela: Using Investment Arbitration to Rewrite a Contract,” *International Institute for Sustainable Development* (September 20, 2013) <http://www.iisd.org/itn/2013/09/20/conoco-phillips-and-exxon-mobil-v-venezuela-using-investment-arbitration-to-rewrite-a-contract/>

³⁶⁶ *Ibid*

Venezuela.

11/22/2001 - President Chavez announced the enactment of 49 new economic laws, just before a law giving legislative power to the president of Venezuela and the executive branch expired. These laws included new legislation that increased royalty taxes on oil production from new oil ventures from 16.6% to 30% and mandated the Venezuelan government own more than 50% of all new oil ventures.³⁶⁷

04/11/2002 - The first coup attempt against President Chavez occurred.

12/2002 to 02/2003 - A general strike was organized by the political opposition to President Chávez to force a new presidential election. The primary economic impact of the strike was to shut down the Venezuelan oil industry, in particular, state-run PDVSA, which provided a majority of Venezuela's export revenue.³⁶⁸ The strike lasted approximately two months. The Chavez government responded by firing 19,000 PDVSA employees and replacing them with employees loyal to the Chávez administration.³⁶⁹

10/2004 - President Chavez declared that Venezuela was increasing the royalties to be paid by foreign oil companies operating in the Orinoco Basin from 1% of the sales price to 16.6% on existing oil ventures. The President said that this decision marked "the second and true phase of the nationalization of the country's oil". He said the purpose of the increase was to secure "sovereignty" over the country's energy reserves; and that oil prices had undergone a structural (as opposed to a cyclical) change that justified the increase. Political and economic observers outside the country suggested that the government's growing budget deficit was an important factor in the decision to raise royalty rates.³⁷⁰

³⁶⁷ The Economist, "To the barricades," (November 22, 2001); Financial Times, "Venezuelan oil law threatens investment," (November 20, 2001); Business News Americas, "Silva holds firm on Hydrocarbons law," May 27, 2002) http://www.bnamericas.com/news/oilandgas/Silva_holds_firm_on_Hydrocarbons_Law.

³⁶⁸ Bart Jones, Bart, *Hugo! The Hugo Chavez Story From Mud Hut to Perpetual Revolution* (London: The Bodley Head, 2008)

³⁶⁹ UN News Centre, "Repression in Myanmar, China, Colombia, Venezuela," (March 30, 2004) <http://www.scoop.co.nz/stories/WO0403/S00397.htm>

³⁷⁰ BBC News, "Venezuela Raises Oil Drilling Tax," (October 11, 2004) <http://news.bbc.co.uk/2/hi/americas/3732224.stm>

04/14/2005 - Venezuelan authorities announced a unilateral revision of 32 contracts signed with oil companies between 1992 and 1997. These contracts would become joint ventures in which the state, through PDVSA, would have at least a 51% stake in each joint venture. The Hydrocarbons Law of 2001 had required *new* joint ventures to include the state oil company, but now the law was being applied retroactively (see entry for November 22, 2001 above).

Venezuelan authorities also announced that they would increase income taxes in the oil industry, from 34 percent to 50 percent and increase royalties from 16.6% to 30% on these contracts. This new tax level was applicable to all companies that drilled, produced, operated, or processed oil in Venezuela. The Venezuelan government would therefore receive a minimum of 82.5% of net income (revenue less production costs).³⁷¹

Furthermore, the government made the tax increase from 34% to 50% retroactive to 2001 and demanded that 16 foreign oil companies pay back-taxes of \$3 billion U.S. These companies included Total (France), BP (United Kingdom), ENI (Italy), Royal/Dutch Shell (The Netherlands), Harvest Vinccler (U.S.), Chevron (U.S.), and Statoil (Norway).³⁷² Total, Chevron, Statoil and BP agreed to the restructuring and still hold minority interests in their Venezuelan projects.³⁷³

2007 - ExxonMobil and ConocoPhillips refused to comply with the requirement that they grant PDVSA a 51% interest in their properties in the Orinoco Basin.³⁷⁴ Venezuela responded by claiming a majority stake in four oil projects with a total value of \$30 billion operating in the Orinoco river basin (*Petrozuata, Hamaca, Cerro Negro and Corocoro*).³⁷⁵

³⁷¹ Financial Post – Canada, "Venezuela Announces Plan to increase income tax on private oil projects," (April 18, 2005)

³⁷² Business News Americas, "Seniat to close offices of 2 foreign oilfield operators," (4 November 2005)
http://www.bnamericas.com/news/oilandgas/Seniat_to_close_offices_of_2_foreign_oilfield_operators

³⁷³ Business News Americas, "Petrobras Reaffirms Investments Despite Contract Changes," (22 November 2005)
http://www.bnamericas.com/news/oilandgas/Petrobras_reaffirms_investments_despite_contract_changes;
AP Worldstream, "Three more oil companies in Venezuela agree to state-controlled joint ventures," (6 October 2005); BBC News, "Venezuela gives Exxon Ultimatum" (6 October 2005)
<http://news.bbc.co.uk/2/hi/americas/4544390.stm>

³⁷⁴ What's Next Venezuela, "Timeline of Expropriations," <https://www.whatsnextvenezuela.com/media-kit/timeline-of-expropriations/>

³⁷⁵ Ibid

09/06/2007 – ExxonMobil registered its claim with the ICSID in response to Venezuela’s expropriation of its assets in Venezuela, seeking compensation of 10.0 billion.³⁷⁶

12/13/2007 – ConocoPhillips registered its claim with the ICSID in response to Venezuela’s expropriation of its assets in Venezuela, seeking compensation of \$5.5 to \$6.0 billion.³⁷⁷

05/08/2009 – (1) A gas injection project owned by Williams Companies was confiscated by the Venezuelan government.³⁷⁸ (2) Venezuela’s National Assembly passed a law allowing the Venezuelan government to nationalize the assets of certain domestic and foreign oil service companies.³⁷⁹

06/2010 – The Venezuelan government seized 11 oil rigs owned by Helmerich and Payne, a U.S. oil company. Helmerich and Payne’s 11 oil rigs had been shut down for several months because Venezuela was unwilling or unable to pay H & P what it was owed.³⁸⁰

03/2011 - Williams Companies, Inc. filed an international arbitration suit against Venezuela at the ICSID, seeking compensation for two natural-gas compression facilities seized by the Venezuelan government in 2009.³⁸¹

09/2011 - The Venezuelan government said it was willing to pay a combined sum of \$2.5 billion to ExxonMobil and ConocoPhillips in their arbitration cases at the ICSID against Venezuela.³⁸²

09/30/2011 - Oklahoma based services company, Helmerich & Payne Inc., filed a lawsuit against Venezuela in the U.S. District Court for the District of Columbia for expropriation of 11 drilling rigs in June 2010. The lawsuit sought \$32 million in back payments for unpaid services and

³⁷⁶ Herbert Smith Freehills, LLP, “ExxonMobil files ICSID arbitration proceedings against Venezuela; energy investors in South America on alert as more World Bank departures threatened”, October 31, 2007, <http://www.lexology.com/library/detail.aspx?g=af22d8b6-00d4-4509-aa68-579abb51c7fc>

³⁷⁷ International Centre for the Settlement of Investment Disputes, Case Details, ConocoPhillips Petrozuata B.V., ConocoPhillips Hamaca B.V. and ConocoPhillips Gulf of Paria B.V. v. Bolivarian Republic of Venezuela, (ICSID Case No. ARB/07/30) <https://icsid.worldbank.org/ICSID/FrontServlet>, Last accessed on June 25, 2014,

³⁷⁸ What’s Next Venezuela, “Timeline of Expropriations,” <https://www.whatsnextvenezuela.com/media-kit/timeline-of-expropriations/>

³⁷⁹ Ibid

³⁸⁰ Ibid

³⁸¹ Ibid

³⁸² Ibid

several hundred million dollars for the value of its 11 drilling rigs. Citing increasing hostility toward U.S. companies by the Venezuelan government, the company argued that it could not get a fair trial in the Venezuelan courts, where its request for compensation had not progressed or even been answered.³⁸³

01/01/2012 - The Paris based International Chamber of Commerce (ICC) awarded ExxonMobil \$907.6 million for breach of contract, substantially less than the \$10.0 billion ExxonMobil was seeking. The ICC reduced the \$907.6 million award by \$160.6 million for liabilities owed by ExxonMobil to Venezuela, making the net award \$747.0 million. In addition, ExxonMobil had previously petitioned a New York Court to seize \$305 million from a PDVSA bank account, which was subsequently turned over to ExxonMobil. The actual amount Venezuela was ordered to pay ExxonMobil therefore was, \$442 million ($907.6 - 160.6 - 305.0 = 442.0$), which is the smallest amount ExxonMobil could have expected to receive, because it represented the book value of its 41.7% interest in the Cerro Negro partnership.³⁸⁴ The arbitration in the ICC was intended to determine damages, if any, related to ExxonMobil's claim that Venezuela and PDVSA had breached the contract when it changed its provisions unilaterally and subsequently expropriated the partnership.³⁸⁵

However, the case was not over because ExxonMobil had sought arbitration in two separate courts: the International Chamber of Commerce (ICC) (just discussed) and the International Centre for Settlement of Investment Disputes (ICSID). This was possible under international law, because in the early 1990s, when ExxonMobil decided to participate in the *Cerro Negro* project it signed a contract with PDVSA and Venezuela in which ExxonMobil owned a 41.7% stake in *Cerro Negro* through a subsidiary based in the Netherlands; and Venezuela and the Netherlands had signed a bilateral investment treaty to promote and protect investments in both countries. The ICSID arbitration panel was therefore judging whether this treaty had been violated by the Venezuelan government. The tribunal's judgment would be based on the text of

³⁸³ Latin American Herald Tribune, "U.S. Driller Helmerich & Payne Sues Venezuela over Expropriated Rigs," (June 25, 2014) <http://laht.com/article.asp?CategoryId=10717&ArticleId=428308>

³⁸⁴ The Devil's Excrement, "ExxonMobil Versus PDVSA: Arbitration and Numbers," (January 1, 2012) <http://devilsexcrement.com/2012/01/02/exxonmobil-versus-pdvsa-arbitration-and-numbers/>

³⁸⁵ *Ibid*

the treaty and any violations that may have occurred.³⁸⁶ The ICSID panel could award ExxonMobil compensation for violations of this treaty, for example, not being paid for amounts owed by Venezuela before the expropriation took place, modifying contracts unilaterally, not being treated fairly and equitably, discriminating against foreign investors in relation to local investors, and not providing prompt and equitable compensation for the assets expropriated.³⁸⁷

01/2012 - President Chávez threatened to ignore any ICSID decision regarding a multi-billion claim made by ExxonMobil for its nationalized oil projects and threatened to withdraw from the arbitration panel.³⁸⁸

01/2012 - Venezuela's Energy Minister said an agreement could not be reached with ConocoPhillips over the company's expropriated assets.³⁸⁹

01/24/2012 - The World Bank received "written notice of denunciation of the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (the ICSID Convention) from the *Republica Bolivariana de Venezuela*. The denunciation was to take effect six months after the receipt of Venezuela's notice, that is, on July 25, 2012."³⁹⁰

02/15/2012 - Venezuela's state oil company, PDVSA, claimed that it had paid ExxonMobil Corp. approximately \$255 million in compensation for nationalized assets, which was substantially less than the \$907.6 million ordered by the International Chamber of Commerce (ICC). President Chávez claimed that the difference reflected the debt owed by ExxonMobil to PDVSA.³⁹¹ (However, this was still less than the \$442 million calculated above.)

³⁸⁶ Ibid

³⁸⁷ Ibid

³⁸⁸ What's Next Venezuela, "Timeline of Expropriations," <https://www.whatsnextvenezuela.com/media-kit/timeline-of-expropriations/>

³⁸⁹ Ibid

³⁹⁰ Milbank, Tweed, Hadley and McCloy, LLP, "Venezuela Withdraws from the World Bank's International Centre for Investment Disputes, Litigation," (January 30, 2012), <http://www.milbank.com/images/content/7/2/7277/Venezuela-Withdraws-From-ICSID-1-30-2012.pdf>

³⁹¹ What's Next Venezuela, "Timeline of Expropriations," <https://www.whatsnextvenezuela.com/media-kit/timeline-of-expropriations/>

03/22/2012 – The Williams Companies, Inc. and the Venezuela government reached a settlement in which Venezuela agreed to pay Williams Companies \$420 million as compensation for its nationalization of the company's assets in Venezuela in May of 2009.³⁹²

09/03/2013 - The World Bank's arbitration panel, the International Centre for Settlement of Investment Disputes, ruled that Venezuela illegally expropriated ConocoPhillips' Petrozuata, Hamaca, and Corocoro projects.³⁹³

09/30/2013 - U.S. District Judge Robert Wilkins ruled that Helmerich & Payne International Drilling and its Venezuelan subsidiary have standing to pursue its expropriation claim against the Bolivarian Republic of Venezuela and its state-sponsored energy company, *Petroleos de Venezuela SA* and its subsidiary *PDVSA Petroleo*.³⁹⁴

10/10/2014 - Venezuela announced that it would pay ExxonMobil more than a billion dollars for the nationalization of its operations in Venezuela in 2007 after the ICSID ordered the Venezuela government to pay \$1.6 billion (1.2 billion euros) to the company. The award was compensation for the expropriation of the *Cerro Negro* project, the *La Ceiba* project and "production and export curtailments" imposed on the *Cerro Negro* development in 2006 and 2007.

ExxonMobil said the decision supported its view that Venezuela failed to fairly compensate it at the time of the expropriation. Venezuelan Foreign Minister Rafael Ramirez said the compensation ordered by the ICSID in the case was within a "reasonable range".

Venezuela also claimed victory in the court case. Ramirez said the tribunal's award was a victory for Venezuelan sovereignty over "exaggerated" claims. He said, however, that Venezuela would pay the fee, only after deducting a previous payment to ExxonMobil made by *Petroleos de Venezuela* of \$908 million related to the *Cerro Negro* expropriation.³⁹⁵

³⁹² Weil, "2012-2013 Litigation Wins Report," http://www.weil.com/files/Publication/de949492-1eb8-476b-86f5-295b2dd17d6a/Presentation/PublicationAttachment/e02fcfe9-476f-4cb9-969c-3bb13d2379ae/2012_13_Litigation_Wins_Report.pdf

³⁹³ Charles Wiley Armbrust, "Political Trends in Latin American Oil: Mexico and Venezuela," *Akin Gump, Strauss, Hauer and Feld LLP* (December 2, 2013) <http://www.akingump.com/en/experience/industries/energy/speaking-energy/political-trends-in-latin-american-oil-mexico-and-venezuela-1.html>

³⁹⁴ Courthouse News Service, "Oil Firms May Have Case Against Venezuela," (September 30, 2013) <http://www.courthousenews.com/2013/09/30/61616.htm>

³⁹⁵ DW, Venezuela agrees to pay ExxonMobil for oil nationalization, October 10, 2014, <http://www.dw.de/venezuela-agrees-to-pay-exxonmobil-for-oil-nationalization/a-17985903>

Digression on Argentina

Between 2001 and 2004, natural gas and electricity transmission companies brought 15 cases against the Argentine government at the ICSID in response to domestic energy pricing policies and tariffs, but not expropriations. Nestor Kirchner served as Argentina's President from May 25, 2003 to December 10, 2007. President Kirchner was considered by some as a left wing president³⁹⁶ however, he did not propose left-wing policies such as socialization of production or the nationalization of public services that had previously been privatized during the presidency of Carlos Menem (July 8, 1989 to December 10, 1999). On December 10, 2007 his wife, Cristina Fernandez de Kirchner, succeeded him and began a second term on December 10, 2011.

04/16/2012 - The Argentine government announced that it would acquire a controlling interest in *Yacimientos Petrolíferos Fiscales (YPF)* by nationalizing the Spanish oil company Repsol's 57.4% ownership of YPF. The takeover followed more than two months of increasing government pressure on YPF after the cost of fuel imports into Argentina doubled to \$9.4 billion in 2011.³⁹⁷

2012 - Repsol registered a claim with the ICSID seeking compensation of \$10 billion for its 57.4% interest in YPF.

07/30/2014 – Argentina defaulted on \$539 million in interest payments due July 30, 2014.³⁹⁸

09/13/2014 – Argentina neared default on \$200 million in interest payments due September 30, 2014.

Case Analysis

The developments in Venezuela and Argentina provide an opportunity to evaluate the factors that lead to resource nationalization. Possible explanations include: (1) a change in the ruling

³⁹⁶ BBC News, "Analysis: Latin America's new left axis," (18 April 2006)

<http://news.bbc.co.uk/2/hi/americas/4916270.stm>

³⁹⁷ BBC News, "Argentina to expropriate Repsol oil subsidiary YPF," (April 16, 2012)

<http://www.bbc.com/news/business-17732910>

³⁹⁸ Almudena Calatrava, "Problems with new Argentine debt payment law", The Associated Press, September 13, 2014, <http://www.usatoday.com/story/money/markets/2014/09/13/problems-seen-with-new-argentine-debt-payment-law/15580155/>

party's economic and political ideology (2) the residual resentment left by colonialism and the political opportunism of politicians (3) national budget deficits and (4) political instability. The discussion below examines each of these as they relate to Venezuela and Argentina.

Political Ideology

The socialist ideology of the Chavez and Maduro governments has been a major factor in the expropriation of oil and natural gas assets in Venezuela. This is less true in Argentina where the decision to expropriate has been driven more by Argentina's worsening budget deficit.

Colonialism and Political Opportunism

The legacy of colonialism is still evident in the degree of income inequality that exists in Venezuela and Argentina. The resentment this produces among the lower classes in both countries allows politicians to exploit this sentiment by encouraging resource nationalism.

National Budgets

The increasing budget deficits in Venezuela and Argentina have compelled politicians in both countries to seek additional sources of revenue through nationalization. Figures 14 and 15 below illustrate the increasing budget deficits in both countries.

Figure 14 – Venezuela's Government Budget Balance – 2005 to 2014

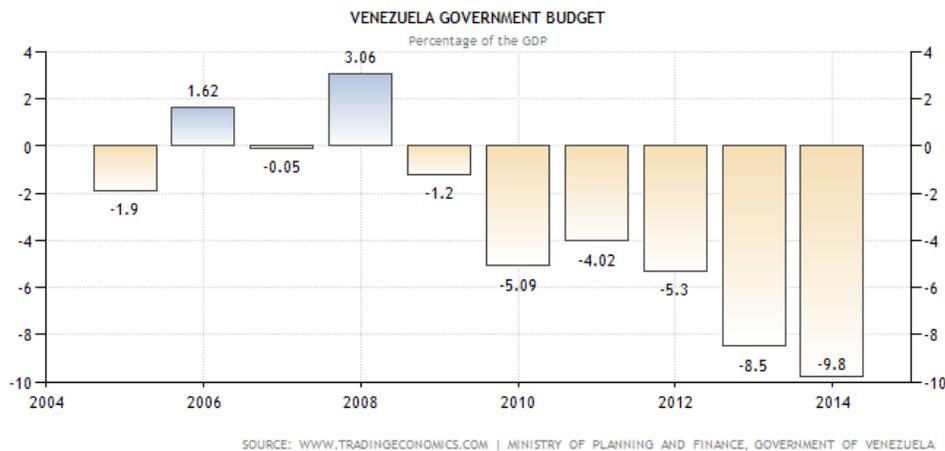


Figure 15 – Argentina’s Government Budget Balance – 2005 to 2014



Political Instability

In 2007, the period during which the largest number of expropriations of oil and gas assets occurred in Venezuela, the country’s political stability rating had fallen to 13. (0 is least stable and 100 most stable.) In 2012, the period during which Repsol’s 57.4% interest in YPF was expropriated, Argentina’s political stability rating had declined to 39. The expropriation of the oil companies operating in Venezuela may have been the ruling party’s response to its mounting financial problems and its increasing vulnerability to the political opposition in the voting booth.

In summary, in Venezuela, the primary factors leading to expropriation were the socialist orientation of the Chavez government and the political instability of the country. In Argentina, the primary factors leading to expropriation were the worsening budget deficit and popular appeal of nationalization among Argentina’s voters.

7.6 Case 6 – The TNK-BP Joint Venture and Russian Politics

Investing in the Russian oil and gas industry has been an unsettling experience for many foreign oil and natural gas companies, particularly for BP, which sold its 50% interest in its TNK-BP joint venture in March 2013. The TNK-BP joint venture had experienced a long list of problems including the imposition of a billion dollar claim for back taxes by the Russian government; delays in the issuance of environmental permits; having its offices searched by Russian state police; and having its chief executive officer, a BP appointee, forced to leave Russia under the threat of arrest. At the time of the sale, TNK-BP accounted for more than 25% of BP’s global oil

production. This case is unique in its specific details, but representative of the sometimes complex interaction between a foreign investor (BP), Russian investors (AAR), state owned oil and gas companies (Gazprom and Rosneft) and a national government (Russia).

Timeline

06/26/2003 - The agreement establishing the TNK-BP joint venture was signed by BP Chief Executive Officer, John Browne and Mikhail Fridman, co-founder and Chairman of Alfa Group a company that was formed after the Soviet Union was dissolved and Russian state owned industries were privatized. To manage their interests in TNK-BP, Fridman and his Russian partners (Viktor Vekselberg and Leonard Blavatnik) formed a consortium named Alfa-Access-Renova (AAR). BP and AAR agreed that each would hold a 50% interest in TNK-BP.

2003 to 2005 - TNK-BP's oil and gas production increased by 24%, after BP engineers introduced new drilling technology that reversed a long decline in production at TNK-BP's most important oil field, the Samotlor field in western Siberia. However, the partnership between BP and AAR experienced problems almost from the beginning and became more contentious over time. BP and AAR repeatedly disagreed about the investment strategy the joint venture should pursue. AAR wanted TNK-BP to invest in oil and gas exploration outside of Russia, for example, Iraq, Lithuania and Turkey, but BP considered TNK-BP to be its Russian subsidiary and saw no value in having TNK-BP compete with BP's projects in other parts of the world. In addition, AAR owned interests in other businesses including telecommunications, banking, aluminum, media, entertainment, and retailing; and wanted TNK-BP to reinvest some of the cash it produced, in those businesses.³⁹⁹

07/2003 – Platon Lebedev, the fourth largest shareholder in OAO Yukos (a private sector oil company), was arrested on charges of illegally acquiring a stake in the state-owned fertilizer company, *Apatit*, in 1994. The arrest was followed by investigations into tax returns filed by OAO Yukos, a large privately owned oil company in Russia.⁴⁰⁰

³⁹⁹ Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk," *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tnkbp-saga-raises-questions-about-bps-handling-of-political-risk>

⁴⁰⁰ Erin E. Arvedlund. "A New Twist in Russia's Yukos Oil Affair". *The New York Times*, April 16, 2004, <http://www.nytimes.com/2004/04/16/business/a-new-twist-in-russia-s-yukos-oil-affair.html?n=Top%2fReference%2fTimes%20Topics%2fPeople%2f%2fLebedev%2c%20Platon>

10/2003 – Mikhail Khodorkovsky, Chairman and CEO of OAO Yukos was arrested and charged with fraud and tax evasion. His arrest and subsequent conviction on these charges were widely interpreted to mean the Kremlin was cracking down on the so-called oligarchs, who had become wealthy and powerful during the period of privatization in Russia in the 1990s.⁴⁰¹

10/2005 - Russian tax authorities imposed a claim for \$936 million in back-taxes on TNK-BP, temporarily raising the prospect of expropriation by the Russian government. However, that prospect diminished after BP's CEO, John Browne, met with Russian President Vladimir Putin and President Putin praised BP as a "good corporate citizen". The claims for back-taxes were later substantially reduced.⁴⁰²

10/03/2006 - Other private sector oil companies that had invested in Russia also came under pressure from the Russian government. For example, after being accused of environmental violations and threatened with multi-billion dollar penalties, Shell Sakhalin Holdings B.V. (a subsidiary of Royal Dutch Shell), Mitsui Sakhalin Holdings B.V. (a subsidiary of Mitsui) and Diamond Gas Sakhalin (a subsidiary of Mitsubishi), agreed to give up controlling interest in the Sakhalin - 2 offshore oil and gas development project. *Gazprom*, the state-owned gas producer, acquired majority ownership in Sakhalin – 2; and Royal Dutch Shell and its partners Mitsui and Mitsubishi had their shares in the project reduced. (These developments made BP's continuing 50% ownership in TNK-BP an exception in an otherwise rapidly renationalizing Russian oil and gas industry.)⁴⁰³

David M. Woodruff. "Khodorkovsky's gamble: from business to politics in the YUKOS conflict". *LSE Research Online*. London School of Economics, 2003, http://eprints.lse.ac.uk/3689/1/Khodorkovsky%E2%80%99s_gamble-from_business_to_politics_%28LSERO%29.pdf

⁴⁰¹ Courtney Weaver, "Time Line: The Rise and Fall of Yukos", *Financial Times*, July 28, 2914, <http://www.ft.com/intl/cms/s/0/f371c836-1645-11e4-93ec-00144feabdc0.html#axzz3O9da8H3P>

⁴⁰² Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk," *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tknbp-saga-raises-questions-about-bps-handling-of-political-risk>

⁴⁰³ Miriam Elder, "Russia look to control world's gas prices," *Telegraph* (2008-12-27).

<http://www.telegraph.co.uk/earth/energy/gas/3982543/Russia-look-to-control-worlds-gas-prices.html>

Tom Parfitt, "Kremlin attack dog vows to take on Shell in the battle of Sakhalin," *The Guardian* (2006-10-04)

<http://www.theguardian.com/business/2006/oct/04/russia.oilandpetrol>

Melissa Kite and Nicholas Holdsworth, "Russian bullying over oil is 'a wake-up call,'" *Telegraph* (2006-12-24)

<http://www.telegraph.co.uk/news/uknews/1537759/Russian-bullying-over-oil-is-a-wake-up-call.html>

03/19/2008 - Officers from Russia's Interior Ministry raided the Moscow offices of BP and TNK-BP in connection with several new investigations for tax evasion. The investigations, which had begun in 2007, gained momentum in early 2008, and by April 2008, the ministry was again investigating claims for back-taxes of more than \$900 million against various TNK-BP subsidiaries. In addition, the Federal Security Service (known by its Russian acronym, the FSB) arrested an employee of TNK-BP and his brother, an independent energy consultant, and charged them with industrial espionage.⁴⁰⁴

04/2008 - Tetlis, (a Moscow based brokerage firm and one of a small group of minority shareholders in TNK-BP Holdings), filed a lawsuit against TNK-BP. Tetlis sued TNK-BP in a Siberian court over a longstanding agreement that allowed technical specialists from BP to be "seconded" to TNK-BP. (When an employee is seconded, the person remains an employee of their current employer (BP), but a contractual agreement is entered into between the employing organization and a third party company (TNK-BP) pursuant to which the employee will perform duties for the benefit of the third party company. At no time does the employee become employed by the third party company.) However, a Siberian court issued an injunction that prevented 148 seconded BP employees from entering the offices of TNK-BP.

At the same time, BP and AAR became engaged in a public argument regarding the salaries of BP employees working at TNK-BP. AAR insisted the BP expatriates were unnecessary and overpaid, but BP defended them. Furthermore, TNK-BP's chief executive officer, Bob Dudley accused AAR of interfering with the Russian work-permit application process to prevent BP employees from renewing their Russian visas, forcing them to leave the country when their old visas expired.⁴⁰⁵

05/2008 - The FSB conducted another raid on BP's Moscow office. Separately, Russia's Natural Resources Ministry announced an environmental inspection of TNK-BP's Samotlor oil field.

⁴⁰⁴ The Telegraph, "TNK-BP: A Troubled History," (July 30, 2014)

<http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/9305157/TNK-BP-a-troubled-history.html>

⁴⁰⁵ Terry Macalister, "Oligarchs to sue TNK-BP after failing to agree control of company," *The Guardian*, (June 11, 2008) <http://www.theguardian.com/business/2008/jun/12/bp.oil1?gusrc=rss&feed=business>

07/2008 - In a separate lawsuit, a group of Russian managers at TNK-BP accused TNK-BP Chief Executive Officer, Bob Dudley, of discrimination, claiming that TNK-BP's Western employees were paid much more than local Russian staff. Eventually, the 148 seconded employees were forced to leave Russia and dozens of other Western employees not directly employed by TNK-BP had to leave the country because they were unable to renew their visas. One of them was Dudley himself, who finally left on July 24, 2008, ending a long struggle with AAR and the Russian authorities.⁴⁰⁶

09/2008 - BP reached an agreement with AAR, in which it ceded operating control of the TNK-BP joint venture to the Russian shareholders (AAR). Under the terms of the agreement, announced in September 2008 and finalized four months later, Dudley resigned as TNK-BP's chief executive officer and AAR obtained the right to approve his replacement. The two sides also agreed to increase the size of TNK-BP's board of directors and add three independent directors, fulfilling another key demand of AAR.⁴⁰⁷

TNK-BP's legal problems diminished significantly after the agreement with AAR was reached. In September 2008, the Russian Interior Ministry announced that TNK-BP had settled most of the claims against it for back-taxes, and the ministry eventually ended its investigation for tax evasion against TNK-BP. In addition, the two brothers arrested by the FSB for industrial espionage were given suspended sentences and Tetlis and the Russian managers dropped their discrimination lawsuits.⁴⁰⁸

2009 to 2010

In 2009, BP played a more passive role in TNK-BP, allowing AAR to run the joint venture. However, that changed on April 20, 2010, when an explosion on BP's Deepwater Horizon drilling rig in the Gulf of Mexico produced a massive oil spill that resulted in billions of dollars

⁴⁰⁶ Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk" *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tknbp-saga-raises-questions-about-bps-handling-of-political-risk>

⁴⁰⁷ The Telegraph, "TNK-BP: A Troubled History," (July 30, 2014) <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/9305157/TNK-BP-a-troubled-history.html>

⁴⁰⁸ Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk," *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tknbp-saga-raises-questions-about-bps-handling-of-political-risk>

in fines by the U.S. government, cleanup costs and liability to individuals, businesses and states along the Gulf Coast.

07/27/2010 - BP announced that Bob Dudley would succeed Tony Hayward as BP's Chief Executive Officer on October 1, 2010. Dudley was also appointed to the board of directors of BP.⁴⁰⁹

01/2011- Dudley announced a strategy that was intended to stabilize BP's financial position and give the company access to significant undeveloped oil and gas reserves in Russia. The plan proposed a common share swap between BP and *Rosneft* (a Russian state owned oil company) in which *Rosneft* would take a 5% stake in BP in exchange for BP taking a 9.5% stake in *Rosneft*. In addition, BP and *Rosneft* agreed to explore and develop three license blocks in the Kara Sea, a Russian part of the Arctic Ocean. However, the proposal was "derailed" by AAR which was upset that BP had not thought to include them in the Arctic deal. AAR cited the original BP-AAR shareholder agreement, which required that BP pursue any Russian projects exclusively through TNK-BP; and sued to block the BP-*Rosneft* deal. A London court and a Stockholm arbitration tribunal agreed that BP was violating the shareholder agreement. Despite last-minute negotiations with AAR to preserve the deal with *Rosneft*, discussion of the proposed alliance ended in May 2011.⁴¹⁰

10/2012 - BP and AAR simultaneously announced they would sell their respective 50% interests in TNK-BP to *Rosneft*, a deal, that valued the joint venture at \$55 billion.

03/21/2013 – BP and AAR sold their respective 50% stakes in TNK-BP to the Russian state-owned oil company *Rosneft*, in a deal that closed on March 21, 2013. BP received compensation of \$26.7 billion (\$12.5 billion in cash and 19.75% of *Rosneft* common stock valued at \$14.2 billion). AAR received \$27.7 billion in cash from *Rosneft*.^{411 412}

⁴⁰⁹ Jennifer Wishon, "BP replaces CEO Hayward, reports \$17 billion loss", CBN News (July 27, 2010) <http://www.cbn.com/cbnnews/us/2010/July/BP-Replaces-Hayward-Reports-17-Billion-Loss/>

⁴¹⁰ Shamil Yenikeeff, "BP, Russian billionaires, and the Kremlin: a Power Triangle that never was" Oxford Energy Comment, (November 2011) <http://www.oxfordenergy.org/wpcms/wp-content/uploads/2011/11/BP-Russian-billionaires-and-the-Kremlin.pdf>

⁴¹¹ Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk," *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tknbp-saga-raises-questions-about-bps-handling-of-political-risk>

Case Analysis

The role of the Russian government in the disputes between BP and AAR has been the subject of considerable speculation. Those familiar with the dispute do not believe that the Russian government orchestrated the legal campaign against TNK-BP. Rather, they believe that AAR used its connections in Russia's government ministries and agencies to apply pressure on Dudley and his team, whom they disliked, as noted by Osipovich.

The security services were used by AAR as one of the means of achieving their main goal. They [AAR] wanted to seize operational control of the company and squeeze out Dudley, who was a very major irritant for them... It's no secret that they had the ability to do this, since they had tight relationships with very senior individuals in the Russian leadership.⁴¹³

BP was not properly prepared for the pressure. It reacted slowly, sometimes even passively, since it is a huge and risk-averse bureaucratic machine that functions relatively well in normal times, but at the time it was not fully up to the task of outright corporate warfare in the Russian style.⁴¹⁴

However, the Russian oil and natural gas industry had been renationalizing under President Putin since his election. The evidence for this includes: (1) The intentional bankruptcy and subsequent sale of Yukos' assets to the state-owned company *Rosneft*; and (2) the allegation of threats to marine life and other environmental problems at the Sakhalin -2 site and a subsequent injunction that rescinded permits for Sakhalin -2's second phase and paved the way for *Gazprom*'s eventual acquisition of a controlling interest in the Sakhalin -2 project. Therefore the Russian ministries did not object when they were asked to put pressure on TNK-BP.

In the case of Yukos the charges against Mikhail Khodorkovsky and Platon Lebedev and the intentional bankruptcy of the company were motivated primarily by Vladimir Putin's desire to remove two businessmen that were a threat to his political power and re-election. In the case of TNK-BP neither BP nor AAR presented a threat to Putin's continuance in office, but TNK-BP was a large and successful project that had significant economic and geo-political value to the Russian government.

⁴¹² Vladimir Soldatkin and Andrew Callus, "Rosneft pays out in historic TNK-BP deal completion," *Reuters* (March 22, 2013) <http://uk.reuters.com/article/2013/03/22/uk-rosneft-tnkbp-deal-idUKBRE92K0IX20130322>

⁴¹³ Alexander Osipovich, "TNK-BP saga raises questions about BP's handling of political risk," *Energy Risk* (March 19, 2013) <http://www.risk.net/energy-risk/feature/2253578/tnkbp-saga-raises-questions-about-bps-handling-of-political-risk>

⁴¹⁴ *Ibid*

Chapter 8 – Summary, Conclusions and Next Steps

8.1 Summary and Conclusions

In Chapter 1, the nature of the bargaining relationship between host countries and international oil companies and the process by which this relationship changes as a project progresses were examined. The evidence supports the view that while exploratory drilling is in progress, and production facilities and pipeline infrastructure are being built, the bargaining power of oil companies and host governments is roughly equal. However, after oil or gas has been discovered and these facilities are operating, the host government and the transit countries acquire the superior bargaining position.

The superior bargaining position of the host country government can manifest itself in several ways. The executive branch of the host country government can unilaterally change the fiscal terms of an agreement; deliberately change the economic or regulatory environment in the country; interrupt the conduct of business by the IOC or expropriate the foreign investor's assets. The judicial branch can refuse to enforce a contract or fail to award fair compensation in a dispute. More generally, host governments can place national politics and geopolitical priorities, such as political popularity, energy security, and national security above the fulfillment of their commercial commitments.

The vulnerability of oil and natural gas projects to politically motivated decisions, including expropriation is derived from: (1) the immobility of oil and gas reserves, (2) the perception in developing countries that foreign ownership of oil and gas reserves is a form of neo-colonialism, making government ownership a source of national pride; and (3) the important role that oil and gas revenue play in the national budget of most oil and natural gas exporting countries.

In Chapter 2, ten research questions were formulated to investigate the development and operation of the institutions that support the oil and gas industry. In Chapter 3, it was argued that (1) the commercial and non-commercial risk of oil and natural gas exploration and production can be reduced by the development of appropriate institutions; and (2) that these institutions contribute to the economic efficiency of the oil and natural gas industry and the world economy. In Chapters 4, the design of the research study was presented and in Chapter 5, the research methods were described.

In Chapter 6, the findings related to these 10 research questions were presented. First, it evaluated the evidence for and against the assertion that the frequency of expropriation of foreign direct investment in the oil and gas industry has increased; and examined the circumstances in which expropriation is more or less likely to occur? It was observed that the frequency of expropriation has varied between 1960 and the present and concluded that the risk of expropriation in the oil and natural gas industry increases when the price of oil rises faster than the long term price trend.

Second, it examined the frequency of investment disputes and the efficiency with which these disputes have been resolved. It found that most IOCs and host governments comply with the terms and conditions of the contracts they sign; and resolve most disputes on their own.

Third, the study summarized the provisions most often included in an oil or gas contract to limit the number of disputes and resolve those that occur. These include a general clause that requires both parties to act “in good faith”, “use reasonable efforts” and fulfill their obligations “in a timely manner”. Other provisions include: an equilibrium clause intended to compensate for changes in the legal or the investment environment in which a contract was originally signed; and a clauses specifying, the choice of law and the court or tribunal to be used in the resolution of a dispute.

Fourth, the study examined the most important clauses in bilateral investment treaties and how effective these treaties have been in resolving disputes. The most common provisions include: a statement of purpose, choice of law, standards of treatment and the legal instruments to be applied in a dispute. The most contentious issue in cases brought before an international court or tribunal is the interpretation of the phrases “fair and equitable treatment” and “fair and equitable compensation”. Nevertheless, bilateral investment treaties are the legal document most often referenced in a dispute brought before an international court or tribunal.

Fifth, this study evaluated whether countries that have signed a large number of bilateral investment treaties or have a higher quality of governance and a more reliable legal system are less likely to be involved in disputes before an international court or tribunal? The number of bilateral treaties a country has signed and the quality of governance in a country are not reliable

predictors of the number of cases that will be brought against it in an international court or tribunal.

Sixth, it evaluated whether a relationship exists between the amount of oil a country consumes and the number of bilateral investment treaties it has signed? The evidence indicated that there is no observable relationship between the amount of oil a country consumes and the number of bilateral investment treaties it has signed. It also evaluated whether a relationship exists between the number of bilateral treaties a country has signed and the amount of foreign direct investment outflows from that country. The evidence indicated that if the United States is excluded from the data, there is a relationship between the number of bilateral investment treaties a country has signed and FDI outflows, but there are other factors affecting the number of bilateral investment treaties a country signs. It also evaluated whether a relationship exists between the number of bilateral treaties a country has signed and the amount of foreign direct investment inflows to that country. The evidence indicated that there is a relationship between the number of bilateral investment treaties a country has signed and FDI inflows, but there is disagreement over the degree of importance of BIT's on FDI inflows. The data on the decisions reached by various international courts and tribunals was insufficient to prove that courts and tribunals are mostly impartial, but it was observed that the amount awarded is frequently less than what the claimant was seeking.

Seventh, this study described the sources of financing and found: (1) that commercial bank debt is the dominant source of financing, followed by bonds, project financing (also usually financed with bank debt) and equity. Master limited partnerships, venture capital and multilateral financing play a smaller role. (2) The centralized finance system is still the most common financing structure. (3) There are three types of fiscal regimes (a) concession or lease (royalty/tax agreements), (b) production sharing agreement, or (c) service agreement. (4) Although some authors have suggested that the interests of IOCs and NOCs might be better served if they formed longer term alliances involving several projects, this study identified several reasons why multi-project alliances between NOCs and IOCs are not likely to be widely adopted.

Eighth, this study examined the financial instruments available for managing commercial and non-commercial risk in the oil and gas industry. The evidence indicates that there is a wide variety of financial instruments available for re-allocating risk. Some of these instruments developed in response to the needs of the oil industry, but most developed in response to the needs of the business community in general.

Ninth, this study examined the relationship between the quality of financial reporting and investment. The theoretical and empirical literature supports the view that higher quality financial reporting results in higher investment efficiency in the context of financial securities traded on a public exchange. However, in this study, a relationship was not found between the quality of financial reporting and foreign direct investment. Some possible explanations were proposed to explain this finding.

Arguments were presented why the estimates of proved, probable and possible reserves made by individual oil companies, NOCs and country ministries are thought by some analysts to be too optimistic. However, estimating the quantity of reserves (conventional and un-conventional) is an inherently difficult process for technical reasons (geology) and economic reasons (changes in the price of crude oil).

Tenth, there are no internationally agreed set of rules for trading energy resources and energy investment, but the absence of an international energy investment agreement or even a substantial number of multilateral agreements may not be significant, because (1) a relatively small number of disputes are adjudicated with reference to an investment treaty. (2) The outcome of an international court proceeding or tribunal is dependent on the standard of treatment applied and the definition of fair and equitable compensation, by the court or tribunal. Therefore, even if a global investment treaty existed, the problems of interpretation would still exist.

The formation of the International Energy Forum (IEF) has led to more cooperation among nations on energy issues, for example the Joint Oil Data Initiative and Joint Gas Data Initiative, but these organizations have been successful primarily in the compilation of historical information. Obtaining data regarding future capital spending has proven more elusive. The

convergence of the IFRS standards, U.S. GAAP and Japanese GAAP since 1990 is an example of organizations (investors, banks and oil companies) reshaping the institutional environment to increase the efficiency of financial reporting.

Signature bonuses are a part of the international oil and gas industry and a source of controversy. How this issue is resolved will depend on the relative economic and political power of the host governments, international oil companies, and the public interest groups.

Critics have argued that energy diplomacy has not lived up to its promise, but these arguments depend in part on a classical or neoclassical view of markets. However, organizational arrangements, gained control, asset specificity, human assets, strategic behavior, contractual safeguards and surrounding uncertainty may ultimately prove to be of greater importance than has been evident so far.

Concluding Remarks

This study supports North's observation that "Incremental change comes from the perceptions of the entrepreneurs in political and economic organizations that they could do better by altering the existing institutional framework at some margin".⁴¹⁵ The evidence for this is the institutions that have been created to promote and protect foreign direct investment in general (bilateral investment treaties, political risk insurance and the International Centre for the Settlement of Investment Disputes (ICSID) and in the international oil and gas industry in particular (Energy Charter Treaty). In addition, the large number of financing sources, financing structures, fiscal regimes and risk management tools demonstrate that organizations are continually experimenting with new techniques for mitigating and re-allocating risk.

Finally, Columbia University law Professor Louis Henkin has observed "It is probably the case that almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time".⁴¹⁶ This includes contracts, bilateral treaties and multilateral treaties. The evidence in this study suggests that this observation is also valid in the oil and gas industry. Of the approximately 1,500 major transactions that take place each year in the oil and

⁴¹⁵ Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, UK: Cambridge University Press, 1990) p. 8

⁴¹⁶ Louis Henkin, *How Nations Behave* (New York: Columbia University Press, 1979) p. 47

gas industry, only a small number result in disputes before the ICSID or some other international tribunal. This is the case despite the fact, that there is no supranational organization capable of enforcing international contracts and bilateral treaties. This is in part because parties to an agreement want the other side to comply with its obligations and one way to encourage this compliance is to meet one's own obligations; and second, parties honor their commitments because if they do not, other parties will be reluctant to contract with them again.

8.2 Next Steps

This study has examined several research questions in considerable detail, but there is a need for additional research at the institutional level, the operational level and the quantitative level.

Institutional Level

First, the process by which individual institutions have been created and the role that specific organizations have played in the development of those institutions, need to be understood in greater detail.

Operational Level

Second, the process by which the parties to a transaction allocate the various types of risk between them, needs to be better understood. Third, the process by which IOCs evaluate political risk needs to be investigated in more detail. Fourth, the political motivations, rather than economic motivations, for signing bilateral treaties needs to be better understood. Fifth, energy diplomacy, in all its forms, needs to be better defined and its impact on the countries that practice it, better understood.

Quantitative Level

Sixth, this study indicated that the number of bilateral treaties a country has signed and the quality of its governance are not reliable predictors of the number of cases brought against it in an international court or tribunal. The variables contributing to the number of cases brought before an international court or tribunal should be studied in more detail.

Seventh, it was observed that if the United States is excluded from the comparison of the number of bilateral treaties a country has signed and FDI outflows and inflows, there appears to be a relationship between them, but the large number of countries clustered on the left side of the

chart indicated that there are other factors affecting the number of bilateral investment treaties a country signs. The variables influencing the number of bilateral treaties a country has signed need to be investigated further.

Eighth, the apparent absence of a relationship between the quality of financial reporting and foreign direct investment needs to be analyzed further to determine whether this result is correct or whether reporting quality has not been operationalized correctly.

Appendix I - Total Petroleum Liquids Consumptions and Production

Table A.1 below shows total petroleum liquids consumption in 66 countries, between 2008 and 2012.

Table A.1 - Total Petroleum Liquids Consumption

(Thousand Barrels Per Day)

	2008	2009	2010	2011	2012
United States	19,498.0	18,771.4	19,180.1	18,882.1	18,490.2
China	7,467.5	8,539.7	9,330.2	9,852.1	10,276.8
Japan	4,798.2	4,389.9	4,455.5	4,470.7	4,726.3
India	2,864.0	3,112.7	3,255.4	3,410.5	3,621.8
Russia	2,906.0	2,950.4	2,992.1	3,115.0	3,195.5
Saudi Arabia	1,979.9	2,194.5	2,371.4	2,816.0	2,861.0
Brazil	2,204.6	2,481.5	2,621.8	2,721.6	2,806.9
Germany	2,542.3	2,453.0	2,469.6	2,396.6	2,388.4
Korea, South	2,142.3	2,188.5	2,268.5	2,257.7	2,301.0
Canada	2,224.9	2,162.9	2,264.6	2,266.0	2,280.8
Mexico	2,161.1	2,070.7	2,080.4	2,113.4	2,144.1
France	1,945.4	1,868.4	1,833.4	1,792.4	1,739.8
Iran	1,741.9	1,765.9	1,726.4	1,700.0	1,709.4
Indonesia	1,360.9	1,405.9	1,465.5	1,534.7	1,590.0
United Kingdom	1,726.1	1,636.8	1,621.5	1,583.8	1,502.7
Singapore	1,006.5	1,169.6	1,380.1	1,380.0	1,380.0
Italy	1,666.8	1,544.2	1,544.2	1,493.8	1,352.8
Spain	1,547.0	1,467.5	1,441.0	1,385.3	1,289.0
Australia	1,054.7	1,041.8	1,059.7	1,104.6	1,126.1
Taiwan	888.8	933.3	972.0	1,030.0	1,079.9
Netherlands	1,068.7	1,005.2	1,019.8	1,016.5	1,020.8
Thailand	729.1	973.5	1,010.5	1,020.0	1,009.0
Venezuela	862.4	674.7	718.2	750.9	776.9
Egypt	700.7	720.7	737.6	745.0	755.0
Iraq	585.0	643.5	662.0	720.0	751.2
Argentina	581.9	588.6	620.3	678.0	698.8
Turkey	655.3	678.1	649.8	655.4	694.2
United Arab Emirates	620.0	565.9	618.3	618.0	618.0
Belgium	716.6	630.2	655.2	622.6	617.8
South Africa	526.9	532.6	549.4	595.0	608.8
Malaysia	669.1	585.1	598.4	598.0	598.0
Poland	535.9	541.1	564.2	559.5	522.0
Pakistan	389.8	390.9	392.3	418.0	440.1
Vietnam	292.8	294.0	320.4	365.0	387.9
Kuwait	325.3	372.1	383.4	383.0	383.0
Chile	369.9	367.6	322.9	333.9	356.2
Algeria	286.3	319.1	323.3	330.0	328.1
Ukraine	337.6	293.8	289.2	300.0	318.8
Greece	428.9	403.4	372.5	351.0	317.9
Sweden	336.8	318.3	335.8	324.1	310.8
Philippines	300.2	295.1	309.2	316.0	302.3
Hong Kong	296.0	353.3	382.5	365.0	289.6
Colombia	259.8	257.5	267.5	282.0	287.2

Israel	246.1	232.8	251.3	247.6	281.5
Nigeria	269.1	242.5	242.2	240.0	269.9
Austria	282.7	271.5	279.3	265.3	258.8
Syria	309.6	314.5	317.8	320.0	257.6
Kazakhstan	247.5	210.0	206.3	216.0	250.7
Switzerland	267.4	259.8	265.6	246.6	249.9
Portugal	288.3	274.7	274.5	260.6	234.0
Norway	229.3	225.3	222.3	223.9	221.9
Romania	230.9	201.3	193.5	217.0	216.3
Ecuador	219.8	208.1	226.4	216.0	212.7
Morocco	215.7	235.3	243.9	240.0	206.2
Finland	217.6	206.4	215.9	207.7	196.5
Czech Republic	215.0	205.5	201.4	196.9	195.5
Qatar	165.5	134.2	123.3	160.0	189.7
Belarus	157.3	182.5	152.4	188.0	187.6
Peru	186.5	188.2	192.5	182.0	171.7
Cuba	141.4	169.6	163.9	184.0	170.9
Libya	257.7	262.9	280.3	130.0	170.4
Denmark	181.1	166.5	167.5	164.0	155.5
Puerto Rico	175.2	155.6	176.0	152.0	152.6
Virgin Islands, U.S.	108.3	111.3	113.5	138.0	152.4
New Zealand	157.4	150.6	151.6	150.9	149.8
Oman	121.6	108.6	113.5	123.0	144.9
All Other	4,203.7	4,247.4	4,317.7	4,421.2	4,481.0
Total	84,696.7	84,918.2	87,528.8	88,744.0	89,432.6

Source: U.S. Energy Information Administration, Total Petroleum Consumption, Last accessed on July 9, 2014
<http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=5&aid=2>

Table A.2 shows total petroleum liquids production in 33 countries, between 2009 and 2013.

Table A.2 - Total Petroleum Liquids Production

(Thousand Barrels Per Day)

	2009	2010	2011	2012	2013
United States	9,133.8	9,684.5	10,136.2	11,109.6	12,316.1
Saudi Arabia	9,819.2	10,642.3	11,264.3	11,725.7	11,591.9
Russia	9,933.8	10,156.9	10,239.2	10,397.0	10,498.2
China	4,067.5	4,362.7	4,347.0	4,372.4	4,459.4
Canada	3,318.8	3,441.7	3,597.3	3,856.4	4,096.6
Iran	4,178.3	4,243.1	4,265.0	3,589.4	3,422.0
United Arab Emirates	2,794.6	2,813.2	3,088.3	3,213.2	3,229.6
Iraq	2,399.2	2,402.9	2,629.0	2,986.6	3,057.7
Mexico	3,000.8	2,978.6	2,960.0	2,936.0	2,907.8
Kuwait	2,505.9	2,460.3	2,691.8	2,796.8	2,811.8
Brazil	2,561.7	2,712.5	2,685.2	2,651.9	2,712.0
Venezuela	2,509.7	2,405.0	2,489.2	2,489.2	2,489.2
Nigeria	2,212.2	2,459.4	2,554.5	2,524.1	2,373.2
Qatar	1,573.2	1,787.9	1,936.4	2,032.6	2,067.3
Algeria	1,909.8	1,881.0	1,863.0	1,875.2	1,846.9
Angola	1,908.0	1,947.8	1,799.9	1,831.6	1,838.5
Norway	2,352.6	2,134.6	2,007.4	1,902.1	1,826.1

Kazakhstan	1,541.6	1,608.7	1,638.4	1,605.9	1,653.0
Colombia	690.3	805.9	938.5	969.1	1,028.5
Libya	1,790.1	1,789.1	501.5	1,483.0	1,000.5
India	873.6	965.3	995.8	990.2	982.2
Oman	818.9	869.9	890.9	923.8	945.1
Indonesia	1,053.2	1,038.7	1,015.5	974.3	925.7
Azerbaijan	1,015.9	1,044.9	993.2	931.9	883.3
United Kingdom (Offshore)	1,422.1	1,318.7	1,084.1	922.4	836.3
Egypt	728.6	717.4	725.7	720.0	709.9
Argentina	801.7	790.5	763.7	723.2	707.9
Malaysia	693.9	683.1	626.0	642.7	630.5
Ecuador	485.7	487.3	500.6	504.5	527.0
Thailand	428.7	430.3	448.8	465.3	473.4
Australia	592.5	604.1	530.5	519.1	446.7
Vietnam	339.8	332.3	323.6	363.5	352.0
Equatorial Guinea	346.0	322.7	298.9	310.4	290.8
Other	5,145.4	5,183.4	5,058.8	4,420.7	4,398.0
Total	84,947.1	87,506.5	87,887.8	89,759.8	90,335.2

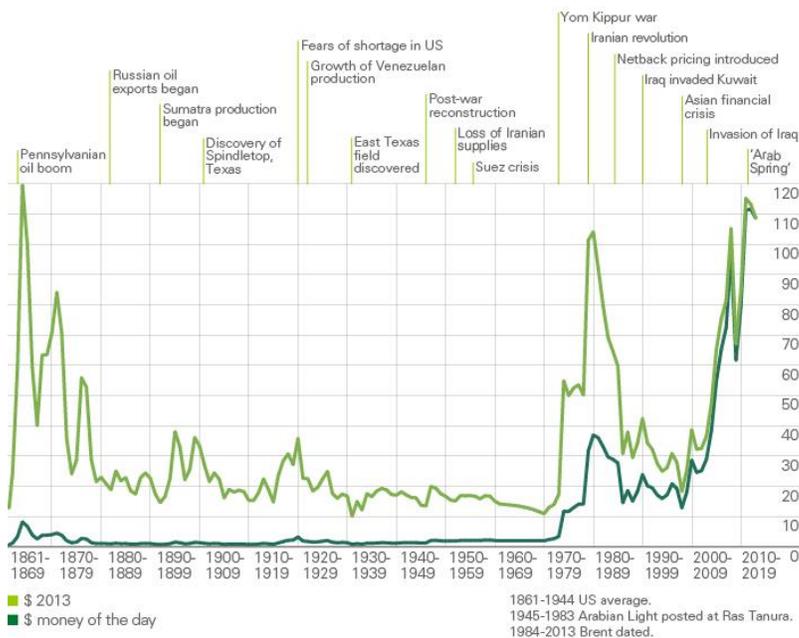
Source: U.S. Energy Information Administration, Total Oil Supply, <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=53&aid=1>, Last accessed on July 9, 2014.

Figure A.1 – Crude Oil Prices 1861-2013

Figure A.1 presents crude oil prices in the money of the day and 2013 dollars

Crude oil prices 1861–2013

US dollars per barrel
World events



BP Statistical Review of World Energy 2014
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Source: BP Statistical Review of World Energy June 2014, <http://www.bp.com/en/global/corporate/about-bp/energy-economics/statistical-review-of-world-energy/review-by-energy-type/oil/oil-prices.html>

Table A.3 presents a list of risks in the oil and gas industry. This study focuses on the risks in bold font.

Table A.3 - Types of Risk in the Oil and Gas Industry	
<i>Below-Ground Uncertainty</i>	<i>Above-Ground Uncertainty</i>
Resource	Domestic Politics
Technologies	International Politics
Product Quality	Economics
Technical Performance	Regulation
Supplier Performance	Contracts
Costs	Corruption and Fraud
Timing and Project Schedule	Fiscal Terms
Contractor Performance	Partners
Operations Logistics	Joint Ventures
Project Execution	Alliances
	Corporate Governance
	Competitors
	Human Resources
	Community
	Security/Terrorism/Piracy
	Health and Safety
	Public Relations and Reputation Risks
	Environment
	Natural Disasters

Adapted from David Wood, *Petroleum Economics, Risk and Opportunity Analysis*, Chapter 10 in Betty J. Simkins and Russell E. Simkins, *Energy Finance and Economics – Analysis and Valuation, Risk Management, and the Future of Energy* (Hoboken, NJ: John Wiley & Sons, Inc., 2013) p. 240

Appendix II Expropriations and the Price of Oil

Table A.4 presents a comparison of the number of expropriations, the average price of crude oil in the United States and the average world price of crude oil.

Table A.4 - Comparison of the Number of Expropriations and the Price of Oil

(Dollars per Barrel and Percent Change)

Year	Number of Expropriations	Annual Average U.S. Crude Oil Price	Change in the Price of U.S. Crude Oil in Dollars	Change in the Price of U.S. Crude Oil in Percent	Annual Average Global Crude Oil Price	Change in the Global Price of Crude Oil in Dollars	Change in the Global Price of Crude Oil in Percent
1960	1	\$2.91			\$1.90		
1961	2	\$2.85	(\$0.06)	-2.11%	\$1.80	(\$0.10)	-5.56%
1962	3	\$2.85	\$0.00	0.00%	\$1.80	\$0.00	0.00%

1963	1	\$2.91	\$0.06	2.06%	\$1.80	\$0.00	0.00%
1964	1	\$3.00	\$0.09	3.00%	\$1.80	\$0.00	0.00%
1965	1	\$3.01	\$0.01	0.33%	\$1.80	\$0.00	0.00%
1966	0	\$3.10	\$0.09	2.90%	\$1.80	\$0.00	0.00%
1967	1	\$3.12	\$0.02	0.64%	\$1.80	\$0.00	0.00%
1968	2	\$3.18	\$0.06	1.89%	\$1.80	\$0.00	0.00%
1969	5	\$3.32	\$0.14	4.22%	\$1.80	\$0.00	0.00%
1970	3	\$3.39	\$0.07	2.06%	\$1.80	\$0.00	0.00%
1971	5	\$3.60	\$0.21	5.83%	\$2.24	\$0.44	19.64%
1972	9	\$3.60	\$0.00	0.00%	\$2.48	\$0.24	9.68%
1973	11	\$4.75	\$1.15	24.21%	\$3.29	\$0.81	24.62%
1974	13	\$9.35	\$4.60	49.20%	\$11.58	\$8.29	71.59%
1975	10	\$12.21	\$2.86	23.42%	\$11.53	(\$0.05)	-0.43%
1976	9	\$13.10	\$0.89	6.79%	\$12.80	\$1.27	9.92%
1977	6	\$14.40	\$1.30	9.03%	\$13.92	\$1.12	8.05%
1978	1	\$14.95	\$0.55	3.68%	\$14.02	\$0.10	0.71%
1979	5	\$25.10	\$10.15	40.44%	\$31.61	\$17.59	55.65%
1980	1	\$37.42	\$12.32	32.92%	\$36.83	\$5.22	14.17%
1981	2	\$35.75	(\$1.67)	-4.67%	\$35.93	(\$0.90)	-2.50%
1982	0	\$31.83	(\$3.92)	-12.32%	\$32.97	(\$2.96)	-8.98%
1983	0	\$29.08	(\$2.75)	-9.46%	\$29.55	(\$3.42)	-11.57%
1984	0	\$28.75	(\$0.33)	-1.15%	\$28.78	(\$0.77)	-2.68%
1985	0	\$26.92	(\$1.83)	-6.80%	\$27.56	(\$1.22)	-4.43%
1986	0	\$14.44	(\$12.48)	-86.43%	\$14.43	(\$13.13)	-90.99%
1987	0	\$17.75	\$3.31	18.65%	\$18.44	\$4.01	21.75%
1988	0	\$14.87	(\$2.88)	-19.37%	\$14.92	(\$3.52)	-23.59%
1989	0	\$18.33	\$3.46	18.88%	\$18.23	\$3.31	18.16%
1990	0	\$23.19	\$4.86	20.96%	\$23.73	\$5.50	23.18%
1991	0	\$20.20	(\$2.99)	-14.80%	\$20.00	(\$3.73)	-18.65%
1992	0	\$19.25	(\$0.95)	-4.94%	\$19.32	(\$0.68)	-3.52%
1993	0	\$16.75	(\$2.50)	-14.93%	\$16.97	(\$2.35)	-13.85%
1994	0	\$15.66	(\$1.09)	-6.96%	\$15.82	(\$1.15)	-7.27%
1995	0	\$16.75	\$1.09	6.51%	\$17.02	\$1.20	7.05%
1996	0	\$20.46	\$3.71	18.13%	\$20.67	\$3.65	17.66%
1997	0	\$18.64	(\$1.82)	-9.76%	\$19.09	(\$1.58)	-8.28%
1998	0	\$11.91	(\$6.73)	-56.51%	\$12.72	(\$6.37)	-50.08%
1999	0	\$16.56	\$4.65	28.08%	\$17.97	\$5.25	29.22%
2000	0	\$27.39	\$10.83	39.54%	\$28.50	\$10.53	36.95%
2001	0	\$23.00	(\$4.39)	-19.09%	\$24.44	(\$4.06)	-16.61%
2002	0	\$22.81	(\$0.19)	-0.83%	\$25.02	\$0.58	2.32%
2003	0	\$27.69	\$4.88	17.62%	\$28.83	\$3.81	13.22%
2004	1	\$37.66	\$9.97	26.47%	\$38.27	\$9.44	24.67%
2005	0	\$50.04	\$12.38	24.74%	\$54.52	\$16.25	29.81%

2006	4	\$58.30	\$8.26	14.17%	\$65.14	\$10.62	16.30%
2007	4	\$64.20	\$5.90	9.19%	\$72.39	\$7.25	10.02%
2008	0	\$91.48	\$27.28	29.82%	\$97.26	\$24.87	25.57%
2009	0	\$53.48	(\$38.00)	-71.05%	\$61.67	(\$35.59)	-57.71%
2010	2	\$71.21	\$17.73	24.90%	\$79.50	\$17.83	22.43%
2011	1	\$87.04	\$15.83	18.19%	\$111.26	\$31.76	28.55%
2012	1	\$86.46	(\$0.58)	-0.67%	\$111.67	\$0.41	0.37%
2013	0	\$91.17	\$4.71	5.17%	\$108.66	(\$3.01)	-2.77%
2014	0	\$53.45	(\$37.72)	-41.37%	\$55.27	(\$53.39)	-49.13%
Jan 2015	0	\$50.05	(\$3.40)	-6.36%	\$51.08	(\$4.19)	-7.58%

Sources: United Nations Conference on Trade and Development (UNCTAD)

http://iiadbcases.unctad.org/cases.aspx?col_year=show

http://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp

EIA, "Petroleum and Other Liquids", Energy Information Administration,

http://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm

Sergei Guriev, Anton Kolotilin and Konstantin Sonin, "Determinants of Nationalization in the Oil Sector: A Theory and Evidence from Panel Data," *Journal of Law, Economics & Organization*, (2011) 27 (2): 301

Summary of Guriev, Kolotilin and Sonin's Determinants of Nationalization

Guriev, Kolotilin and Sonin analyzed the determinants of oil and gas asset nationalizations (expropriations) from 1960 to 2006. They found that the largest number of nationalizations took place when oil prices were rising rapidly relative to the long term price trend; and were more likely to occur in countries in which political institutions were weak.⁴¹⁷

Empirical Method

Their model has two testable hypotheses (1) a positive oil price shock increases the risk of nationalization and (2) weak political institutions increase the risk of nationalization. The dependent variable is a dummy variable indicating whether an expropriation took place in a given country in a given year (yes = 1, no = 0) in firms in SIC codes 1300 (Oil and Gas Extraction) and 1310 (Crude Petroleum and Natural Gas). Their study covers the period from 1960 to 2006 and includes 98 nationalizations in 42 countries. Hypothesis 1 asserts that the probability of nationalization depends on the deviation of the oil price from its long term trend, rather than on the trend itself. To model this theory and derive empirical implications, they removed the trend from the data.

⁴¹⁷ Sergei Guriev, Anton Kolotilin and Konstantin Sonin, "Determinants of Nationalization in the Oil Sector: A Theory and Evidence from Panel Data," *Journal of Law, Economics & Organization*, (2011) 27 (2): 301

The independent variables include:

(1) The deviation in price from the trend. They refer to this variable as the “oil price shock”.

(2) They also included the logarithm of the real oil price to determine whether the nationalizations were better explained by the oil price itself, or the “de-trended” change in price (1 above).

(3) To evaluate the influence of the quality of institutions on the probability of expropriation they used the Polity IV data set prepared by Marshall and Jaggers. This variable which they designated, XCONST, ranges from 1 to 7 (in which 1 is the lowest quality of institutions and 7 is the highest quality). The XCONST variable captures the strength of institutions, *understood as the rules of the game*. (This reference to the “rules of the game” is included in their paper.)

(4) They controlled for the general level of economic development by using the logarithm of the real gross domestic product (GDP) per capita. The data was taken from the World Development Indicators, but they note that there are many gaps in these data prior to 1980 in less developed countries, where and when most nationalizations took place. For this reason, they estimated the regression specifications with and without per capita GDP (the latter to increase the sample size).

(5) In their model, governments are infinitely lived, but in reality, nationalizations may be driven by a change in regime. The authors used the data on leadership turnover to control for this relationship. The change in a ruler is a dummy variable, which indicates that there was a transition in a given country in a given year or there was not. The data were compiled from www.worldstatesmen.com.

Main Results

The authors used a linear probability model with fixed country effects. The results are presented in Table A.5. Regression 1 indicates that nationalizations are more likely to occur when the oil price shock is large. For example, an oil price shock of 38%, increases the probability of nationalization in a given country and year by approximately 1.2% ($.030 \times 38.0\% = 1.14\%$)

There are approximately 130 countries in the sample, therefore a 38% increase in the price of oil relative to the trend, increases the number of nationalizations in a given year by approximately 1.6, ($130 \times .012 = 1.56$). This is statistically and substantively significant given that oil nationalizations are rare. The average number of nationalizations per year in 1960 - 2006 was 2.1 (98 nationalizations/47 years = 2.09) with a standard deviation of 3.3 expropriations).

Table A.5 - Regressions Using the Nationalization Dummy

(1960-2006)

	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5	Regression 6
Oil price shock	0.030	0.038			0.037	0.037
Standard Error	(0.011)***	(0.013)***			(0.014)**	(0.014)**
Executive constraints		-0.004	-0.004	-0.004	-0.005	-0.005
Standard Error		(0.001)***	(0.001)**	(0.001)***	(0.002)***	(0.002)***
Log real price change			0.042			
Standard Error			0.042			
Log real oil price				-0.002		
Standard Error				(0.005)		
Log GDP per capita					0.000	0.000
Standard Error					(0.005)	(0.005)
Change in government						0.009
Standard Error						(0.005)*
Observations	7567	5759	5759	5759	5030	4978
R-squared	0.07	0.08	0.08	0.07	0.09	0.09

Observations = 161 countries x 47 years per country = 7,567

Observations = 161 countries x an average of 36 years per country = 5,796

Observations = 107 countries x 47 years per country = 5030

Observations = 106 countries x 47 years per country = 4,978

All regressions use the linear probability model with country fixed effects; Standard errors are clustered at the year level.

In regressions 1, 2, 5, and 6, the authors use the oil price shock, that is, the deviation of the log real price of oil from its 50-year trend.

In regression 3, the authors replace the oil price shock with the log of the change in real oil price.

In regression 4, the authors use the log of the real price of oil.

Robust standard errors are in parentheses.

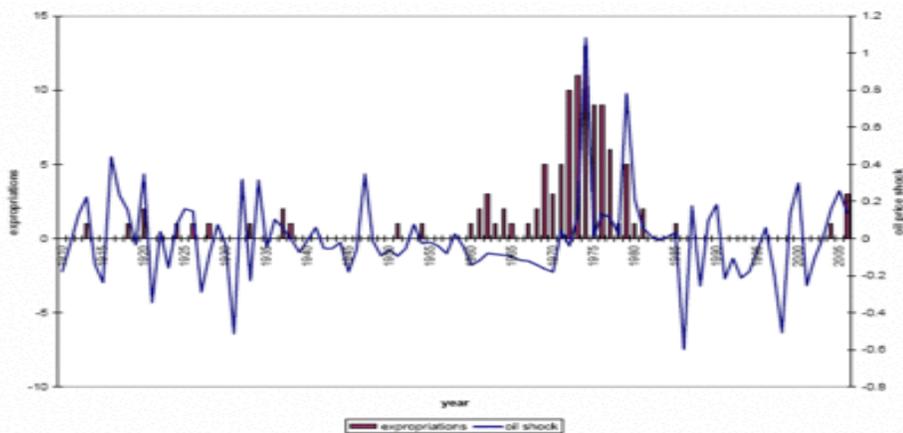
*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level.

Regression 2 indicates that controlling for price shock and country fixed effects (i.e. factors that do not vary with time, such as legal origin, colonial legacies, religion and culture), a higher quality of institutions reduces the risk of nationalization. The effects are statistically and substantively significant. For example, if the quality of institutions change by 1.9 points (on a scale from 1 to 7). This change in institutional quality implies a change of .8% in the number of nationalizations in a given country-year ($1.9 \times -.004 = .008$). Multiplying the number of countries in the sample (130) by .8% gives 1.0 more nationalization per year. Again this is statistically and substantively significant given that expropriations in general are rare. The R^2 value in every regression involving the quality of political institutions, XCONST, is between .07 and .09 however R^2 is not an appropriate measure of goodness of fit in a dichotomous linear probability model.

Regressions 3 and 4 tests whether the results are similar for the year over year change in price and the price itself, respectively. Neither is statistically significant, therefore nationalizations are not correlated with the year over year change in price or the price itself.

Regressions 5 and 6 control for GDP per capita and for changes in government leadership; adding these variables does not affect the coefficients of the oil price shock or executive constraints; and per capita GDP and a regime change does not increase the risk of nationalization.

Figure A.2 - Number of oil expropriations (left vertical axis) and oil price deviation from the long-term trend (right vertical axis), 1910-2006



Source: Guriev et al. (2008).

Table A.6 - Detailed Chronology of Privatizations and Expropriations (1989 to 2014)

1989 - Repsol (a Spanish oil company) was privatized by selling 100% of the company to the public between 1989 and 1997.

1990-1991- No expropriations were reported.

1992 - Total (a French oil company) began the process of privatizing the company. The company sold a 30% interest to the public in 1992 and the remaining 70% to the public in 1998.

08/24/1992 - ARCO and Sun Co. Inc. agreed to separate settlements totaling almost \$261 million that resolved their claims over oil field assets expropriated by Iran in 1978-80. The agreements were subject to approval by the Iran-U.S. claims tribunal at The Hague. The tribunal was set up in 1981 to resolve foreign claims to assets nationalized by the government of Ayatollah Khomeini following the fall of the Shah of Iran during the 1978-79 Iranian revolution.⁴¹⁸

12/13/1993 - (1) Effective November 18, 1993 Peru established a new state petroleum company, *Perupetro SA*, to oversee new and existing contract responsibilities of *Petroleos del Peru SA (Petroperu)*, which was to be privatized in 1994. *Petroperu* would continue to operate its oil field, refining, transportation, and marketing assets. (This privatization had not occurred as of August 7, 2014.) (2) In addition, the government of Peru made a \$30 million payment to AIG in late September 1993. AIG was owed \$184.8 million because they were Belco's insurer. Belco's assets were expropriated by the Peruvian government in December 1985.^{419 420}

1993 - Oil and Natural Gas Corporation Limited (ONGC) sold a 16% interest to the public.

1994 - OAO Gazprom (a Russian natural gas company) sold a 62% interest to the public; and Lukoil (a Russian oil company) became a private sector company (100%).

⁴¹⁸ Oil & Gas Journal, "ARCO and Sun Agree to Settle Iranian Claims," (08/24/1992)

<http://www.ogj.com/articles/print/volume-90/issue-34/in-this-issue/general-interest/arco-and-sun-agree-to-settle-iranian-claims.html>

⁴¹⁹ Oil & Gas Journal, "Peru Marks Progress in Privatizing Petroleum," (12/13/1993)

<http://www.ogj.com/articles/print/volume-91/issue-50/in-this-issue/general-interest/peru-marks-progress-in-privatizing-petroleum.html>

⁴²⁰ Oil & Gas Journal, "Industry Briefs," (10/04/1993) <http://www.ogj.com/articles/print/volume-91/issue-40/in-this-issue/general-interest/industry-briefs.html>

09/05/1994 - Peru agreed to pay \$55 million in compensation to a German group for the military government's 1974 expropriation of the undeveloped *Aguaytia* gas field and the producing *Maquia* oil field in Peru's central jungle.⁴²¹

1995 - (1) Three privatizations occurred. IndianOil Corporation Limited sold 11% of its shares to the public. As of 2014, the Indian government owned 79% and the public owned 21%. (2) *Energis S.A* (ENI, Italy) sold a 15% interest in the company to the public. (3) *Petróleo Brasileiro S.A.* sold a 49% interest in the company to the public.

1996-1999 - No significant privatizations or expropriations occurred.

2000 - Two significant partial privatizations occurred. China Petrochemical Corporation (SINOPEC) began the sale of a 24% interest in the company to the public; and PetroChina Company Limited (PetroChina) began the sale of a 14% interest in the company to the public.

2001 - Three significant partial privatizations occurred. (1) The Chinese National Offshore Oil Corporation (CNOOC) sold a 29% share of its common stock to the public. (2) Statoil, a Norwegian national oil company, sold a 38% interest to the public. (3) Public ownership in ENI was increased to 70%.

2002 - No expropriations were reported.

2003 - Following a tax reassessment, the Russian government presented OAO Yukos with a series of tax claims that totaled US \$27 billion. Yukos' assets were frozen by the government at the same time and the company was therefore unable to pay these tax claims.⁴²² Most of Yukos's assets would subsequently be sold at low prices to oil companies owned by the Russian government.⁴²³ (See entry for 11/19/2004.) The Parliamentary Assembly of the Council of

⁴²¹ Oil & Gas Journal, "Industry Briefs," (09/05/1994) <http://www.ogj.com/articles/print/volume-92/issue-36/in-this-issue/general-interest/industry-briefs.html>

⁴²² BBC News, "Yukos case against Russia begins at European court," (4 March 2010) <http://news.bbc.co.uk/2/hi/europe/8549226.stm>

⁴²³ New York Times, "Russian state oil company wins another Yukos auction," (8 August 2007) http://www.nytimes.com/2007/08/08/business/worldbusiness/08iht-yukos.4.7045853.html?_r=1

Europe condemned Russia's campaign against Yukos and its owners as “manufactured” for political reasons and a violation of human rights.⁴²⁴

03/02/2004 - Marathon Oil Corp. cancelled its proposed LNG complex in Baja California, after the state government appropriated the land near Tijuana known as "*Il Monumento*," for public use, an area which included land Marathon had selected for its project. Marathon had options to purchase the land, but did not own it at the time the property was taken.⁴²⁵

07/20/2004 - Bolivian President, Carlos Mesa, declared victory regarding the referendum to increase state involvement in the country's gas reserves, after early returns showed that Bolivians approved all five measures on the ballot.⁴²⁶

08/02/2004 - The Overseas Private Investment Corp (OPIC) denied charges made by Venezuela's state-owned oil company *Petróleos de Venezuela S.A.* (PDVSA) that the U.S. agency's decision to pay \$6 million on an insurance claim to Science Applications International Corp. (SAIC), an information technology contractor, was politically motivated.⁴²⁷

11/19/2004 - The Russian government announced bidding opened for an auction of a subsidiary of OAO Yukos to be held on December 19, 2004. The auction of 76.79% of *Yuganskneftegaz* was open to international companies. The Russian government required a \$1.7 billion deposit to bid and set the minimum bid at \$8.6 billion. Yukos claimed the subsidiary's value was \$20 billion.⁴²⁸

2005 - There were no expropriations or threats of expropriation.

⁴²⁴ Council of Europe, “Parliamentary Assembly, Resolution 1418 (2005)

<http://assembly.coe.int/main.asp?Link=/documents/adoptedtext/ta05/eres1418.htm>

⁴²⁵ Oil & Gas Journal, “Marathon cancels Baja California LNG project following site expropriation,” (03/02/2004) <http://www.ogj.com/articles/2004/03/marathon-cancels-baja-california-lng-project-following-site-expropriation.html>

⁴²⁶ Oil & Gas Journal, “Preliminary vote tally indicates approval of Bolivian gas exports 07/20/2004,” <http://www.ogj.com/articles/2004/07/preliminary-vote-tally-indicates-approval-of-bolivian-gas-exports.html>

⁴²⁷ Oil & Gas Journal, “OPIC refutes PDVSA complaints over INTESA claim,”(08/02/2004) <http://www.ogj.com/articles/print/volume-102/issue-29/general-interest/opic-refutes-pdvsa-complaints-over-intesa-claim.html>

⁴²⁸ Oil & Gas Journal, “Russian government to auction subsidiary of Yukos on Dec. 19,” (11/19/2004) <http://www.ogj.com/articles/2004/11/russian-government-to-auction-subsiary-of-yukos-on-dec-19.html>

05/08/2006 - Bolivia demanded that Brazil's state-run *Petroleo Brasileiro SA* (Petrobras), Royal Dutch Shell PLC, and other private firms turn over their Bolivian retail networks to state-owned *Yacimientos Petroliferos Fiscales Bolivianos* (YPFB) within 180 days.⁴²⁹

05/17/2006 - Occidental Petroleum Corp. filed an arbitration claim against Ecuador on May 17, 2006 seeking reparation for losses following Ecuador's termination of Occidental's exploration and development contract and the immediate confiscation of the company's Amazon oil field operations in Block 15 and its *Eden-Yuturi, Limonchcha, Indillana, Paca Norte, Paca Sur, and Yanaquincha* fields on May 15, 2006.

Occidental filed a claim with the International Centre for Settlement of Investment Disputes (ICSID), invoking the US-Ecuador Bilateral Investment Treaty to try to restore the company's rights in Ecuador and prevent the Ecuadorian government from turning operations over to a third party, until the claim was settled.⁴³⁰

06/05/2006 - (1) Bolivia's President Evo Morales issued a decree reaffirming that Brazil's state-run *Petroleo Brasileiro S.A.* (Petrobras), Royal Dutch Shell PLC, and other private firms must turn over their Bolivian retail networks within a month to state-owned *Yacimientos Petroliferos Fiscales Bolivianos* (YPFB). He also demanded that Petrobras, which owned 25% of the country's retail outlets, give up its 27,250 b/d refinery at Cochabamba and a 20,000 b/d refinery at Santa Cruz de la Sierra.⁴³¹ (2) Alaska's Governor Frank H. Murkowski released a revised natural gas pipeline agreement negotiated with the three North Slope oil producers, which he said the oil companies were ready to sign if the state legislature approved it.⁴³²

⁴²⁹ Oil & Gas Journal, "Watching the World: Bolivia now, who's next?," (05/08/2006)
<http://www.ogj.com/articles/print/volume-104/issue-18/general-interest/watching-the-world-bolivia-now-whos-next.html>

⁴³⁰ Oil & Gas Journal, "Occidental files claim against Ecuador"
(06/05/2006) <http://www.ogj.com/articles/print/volume-104/issue-21/regular-features/ogj-newsletter/ogj-newsletter.html>

⁴³¹ Oil & Gas Journal, "Bolivia Demands Retail Networks, Refineries," (06/05/2006)
<http://www.ogj.com/articles/print/volume-104/issue-21/regular-features/ogj-newsletter/ogj-newsletter.html>

⁴³² Oil & Gas Journal, "Revised Alaskan gas pipeline accord issued," (06/05/2006)
<http://www.ogj.com/articles/print/volume-104/issue-21/regular-features/ogj-newsletter/ogj-newsletter.html>

08/01/2006 - A Russian court declared OAO Yukos bankrupt.⁴³³

09/25/2006 - (1) A Russian government injunction rescinded permits for the second phase of Sakhalin-2, alleging threats to marine life resulting from inadequate environmental safeguards. Shell and its partners Mitsubishi and Mitsui, disputed the claims, but revocation of the permits effectively suspended the project. In addition, Interfax reported that an official of the Natural Resources Ministry had implied that the other projects at Sakhalin Island were in violation of their licenses. At the same time, *Gazprom* was lobbying for a stake in the Sakhalin-2 venture. (2) The Financial Times reported threats by Russian prosecutors to suspend the license of TNK-BP to develop *Kovytko* gas field in eastern Siberia. In that case, as with Sakhalin-2, the allegations were related to environmental issues.⁴³⁴

01/15/2007- An agreement was signed between Royal Dutch Shell PLC and *OAO Gazprom*, the Russian state-owned natural gas company, under which *Gazprom* would become the majority shareholder in the Sakhalin-2 LNG Project. Under the terms of the agreement, *Gazprom* would purchase 50% plus one share of the project for \$7.45 billion, thereby forcing Shell and its partners, Mitsui & Co. Ltd. and Mitsubishi Corp. to dilute their interest by 50% in order to accommodate their new partner, *Gazprom*. Shell was forced to give up majority control in one of its most valuable assets after having invested over \$6 billion to develop the project.

Immediately following the agreement, Russian President Vladimir Putin held a press conference at which he announced that the environmental violations at Sakhalin-2 had been resolved to the satisfaction of the Russian regulatory authorities.⁴³⁵

06/27/2007 - *Petroleos de Venezuela S.A.* (PDVSA) assumed ownership of ConocoPhillips's interests in the *Petrozuata* and *Hamaca* heavy-oil ventures in Venezuela and the offshore *Corocoro* development project, after PDVSA and ConocoPhillips were unable to reach an agreement under which ConocoPhillips would transition to a "*Empresa Mixta*" structure

⁴³³ Alex Nicholson, "Russian Court Declares Yukos Bankrupt", The Washington Post with Bloomberg, August 1, 2016, <http://www.washingtonpost.com/wp-dyn/content/article/2006/08/01/AR2006080100500.html>

⁴³⁴ Oil & Gas Journal, "Russian Energy Security," (09/25/2006) <http://www.ogj.com/articles/print/volume-104/issue-36/regular-features/editorial/russian-energy-security.html>

⁴³⁵ Oil & Gas Journal, "COMMENT: Sakhalin-2 deal will alter business climate, markets," (01/15/2007), <http://www.ogj.com/articles/print/volume-105/issue-3/general-interest/comment-sakhalin-2-deal-will-alter-business-climate-markets.html>

mandated by Venezuelan law. ConocoPhillips said it intended to record a complete impairment of its interest in its oil projects in Venezuela which it valued at \$4.5 billion. Prior to the expropriation of its interests, ConocoPhillips held a 50.1% interest in *Petrozuata*, a 40% interest in *Hamaca*, and a 32.5% interest in *Corocoro*.⁴³⁶

10/2007 - In October 2007, Ecuador's President Rafael Correa imposed a windfall profits tax on oil and operations whereby the government would receive 99% of oil profits, changing the prior law which required a 50-50 split of profits.⁴³⁷

2008 - There were no reports of expropriation or privatization.

04/19/2010 - Rafael Correa, president of Ecuador, the smallest oil producer within the Organization of Petroleum Exporting Countries, said a bill would be introduced in the legislature that would allow expropriation of those companies that refused to convert their production-sharing contracts into service contracts.⁴³⁸

07/02/2010 - Venezuela nationalized 11 oil rigs owned by Helmerich & Payne (H&P).⁴³⁹

03/29/2011 - Madagascar Oil of Houston, declared *force majeure* under the four production-sharing contracts for Blocks 3104, 3105, 3106, and 3107 that it operated in Madagascar in order to safeguard its rights under those agreements. The company said the declaration of *force majeure* was made in response to the threat of expropriation made by the Minister of Mines and Hydrocarbons and the failure by the Ministry to instruct the state regulatory authority to proceed with the approval of Madagascar Oil's 2011 work program.⁴⁴⁰

⁴³⁶ Oil & Gas Journal, "Venezuela takes over heavy-oil interests from ConocoPhillips," (06/27/2007), <http://www.ogj.com/articles/2007/06/venezuela-takes-over-heavy-oil-interests-from-conocophillips.html>

⁴³⁷ Oil & Gas Journal, "Uruguay attracts interest in its first licensing round," (05/18/2009) <http://www.ogj.com/articles/print/volume-107/issue-19/general-interest/uruguay-attracts-interest-in-its-first-licensing-round.html>

⁴³⁸ Oil & Gas Journal, "Crude takes largest 1-day loss since February," (04/19/2010) <http://www.ogj.com/articles/2010/04/market-watch-crude6.html>

⁴³⁹ Oil & Gas Journal, "Venezuela nationalizes H&P rigs," (07/02/2010) <http://www.ogj.com/articles/2010/07/venezuela-nationalizes.html>

⁴⁴⁰ Oil & Gas Journal, "Madagascar Oil declares force majeure" (03/29/2011) <http://www.ogj.com/articles/2011/03/madagascar-oil-declares.html>

04/23/2012 - Argentina took control of the energy company YPF SA. The Spanish company Repsol, part owner of YPF SA issued a statement saying it would take all legal measures to preserve the value of its assets and the interests of its shareholders. Repsol valued YPF SA at \$18 billion of which Repsol owned 57.43%.⁴⁴¹

04/26/2012 - Argentina's Senate approved a bill to expropriate YPF and the Lower House of Congress was expected to vote on the measure.⁴⁴²

Source: Entries above not assigned a citation are from Andrew Inkpen and Michael H. Moffett, *The Global Oil & Gas Industry – Management, Strategy and Finance*, (Tulsa, OK: PennWell Corporation,), 2011, p. 62
The complete listing of media reports of expropriations can be found at the Oil & Gas Journal website, http://www.ogj.com/*m/_search?q=expropriation.

Appendix III - List of Cases Reported by UNCTAD Related to Oil and Natural Gas

Table A.7 - Complete List of Cases Reported by UNCTAD Related to Oil and Natural Gas

Year Case was Initiated	Year Award was Rendered	Parties	Amount Sought by Investor	Amount Awarded to Investor	Status
1996	1999	Biederman v. Kazakhstan	unknown	US\$ 8.9 million awarded	awarded in favor of the investor
2002	2004	Occidental Exploration and Production Company v. Ecuador (LCIA Case No. UN3467)	US\$ 201,563,930	US\$ 71,533,649 awarded plus simple interest of US\$ 3,541,280 to 1 January 2004, plus simple interest of 2.75% to date of award; London Court of Appeal dismissed request for review on 4 July 2007	awarded in favor of the investor

⁴⁴¹ Oil & Gas Journal, "Repsol calls Argentina's nationalization of YPF 'unlawful', (04/17/2012) <http://www.ogj.com/articles/2012/04/repsol-calls-argentinas-nationalization-of-ypf-unlawful.html>

⁴⁴² Paula Dittrick, Argentina's Senate approves bill to expropriate YPF, Oil & Gas Journal, 04/26/2012, <http://www.ogj.com/articles/2012/04/argentinas-senate-approves-bill-to-expropriate-ypf.html>

2001	2005	CMS Gas Transmission Company v. Argentina (ICSID Case No. ARB/01/8)	US\$ 261.1 million (or 243.6 million and shares) plus interest	US\$ 132 million plus interest awarded; The application for annulment of Argentina was partially dismissed US\$ 1,130,859 awarded plus interest;	awarded in favor of the investor
2003	2005	Petrobart v. Kyrgyzstan (Arb. No. 126/2003)	US\$ 4,084,651 plus interest	Application for setting aside of award rejected by Svea Court of Appeal on 13 April 2006	awarded in favor of the investor
2001	2007	Enron Corporation and Ponderosa Assets LP v. Argentina (ICSID Case No. ARB/01/3)	up to US\$ 582 million	US\$ 106.2 million awarded plus interest (2%); annulment proceeding pending US\$ 128,250,462 awarded plus interest (2% beginning on 1 January 2007 until the date of the award); annulment proceeding pending	awarded in favor of the investor
2002	2007	Sempra Energy International v. Argentine Republic (ICSID Case No. ARB/02/16)	approximately US\$ 210 million	US\$ 5,883,770.80, and US\$ 265,000.00 and € 110,995.92 awarded plus interest	awarded in favor of the investor
2005	2009	Saipem S.p.A. v. People's Republic of Bangladesh (ICSID Case No. ARB/05/7)	US\$ 5,883,770.80, and US\$ 265,000.00 and € 110,995.92 awarded plus interest	Tribunal has jurisdiction and awards US\$ 185,285,485.85 plus interest and arbitration costs	awarded in favor of the investor

2001	2004	CCL Oil v. Kazakhstan (SCC Case 122/2001)	Euro 178,892,338	Tribunal has jurisdiction; Tribunal rejects claims on the merits (awards only partly public)	awarded in favor of the state
1999	2005	Methanex Corp. v. United States	US\$ 970 million including interest and costs	claim dismissed in its entirety	awarded in favor of the state
2003	2006	Encana v. Ecuador (LCIA Case No. UN3481)	Approx. C\$ 100 million (equivalent to approx. US\$ 70 million)	\$330,000 awarded to plaintiff	awarded in favor of the state
2002	2007	LG&E Energy Corp., LG&E Capital Corp. and LG&E International Inc. v. Argentine Republic (ICSID Case No. ARB/02/1)	Approx. US \$248 million plus interest	Tribunal partially granted investor's claims; US \$57.4 million plus interest	awarded in favor of the state
2003	2008	Plama Consortium Limited v. Republic of Bulgaria (ICSID Case No. ARB/03/24)	US\$ 300 million	Tribunal has jurisdiction but claims dismissed on the merits	awarded in favor of the state
2006	2009	Azpetrol International Holdings B.V., Azpetrol Group B.V. and Azpetrol Oil Services Group B.V. v. Republic of Azerbaijan (ICSID Case No. ARB/06/15)	unknown	tribunal lacks jurisdiction	awarded in favor of the state
2008	2010	Mohammad Ammar Al-Bahloul v. Republic of Tajikistan, SCC Case No. V (064/2008)	\$227 million	300,000 Euros	awarded in favor of the state
2010	2010	RSM Production Corporation and others v. Grenada (ICSID Case No. ARB/10/6)	unknown	Tribunal finds claims manifestly without legal merit	awarded in favor of the state

2003	Pending	Camuzzi International SA v. Argentine Republic (ICSID Case No. ARB/03/2)	unknown	pending	pending
2003	Pending	Gas Natural SDG, S.A. v. Argentine Republic (ICSID Case No. ARB/03/10)	unknown	pending	pending
2003	pending	Pan American Energy LLC and BP Argentina Exploration Company v. Argentine Republic (ICSID Case No. ARB/03/13) (consolidated with ICSID Case No. ARB/04/8)	unknown	pending	pending
2003	pending	El Paso Energy International Company v. Argentine Republic (ICSID Case No. ARB/03/15)	unknown	pending	pending
2004	pending	Wintershall Aktiengesellschaft v. Argentine Republic (ICSID Case No. ARB/04/14)	unknown	tribunal lacks jurisdiction	pending
2004	pending	Total S.A. v. Argentine Republic (ICSID Case No. ARB/04/1)	Approx. US\$ 1 billion	pending; Tribunal has jurisdiction (decision not public yet)	pending
2004	pending	Mobil Exploration and Development Inc. Suc. Argentina and Mobil Argentina S.A. v. Argentine Republic (ICSID Case No. ARB/04/16)	unknown	pending	pending
2005	pending	RosInvestCo. UK Ltd. v. Russian Federation (V 079 / 2005)	unknown	pending	pending
2005	2014	Yukos Universal Ltd. v. Russian Federation (PCA Case No. AA 227)	\$114 billion sought by 3 investors against the Russian Federation	Court orders Russia to pay \$50 billion for seizing Yukos assets	Award in favor of Investor

			(amount sought by each investor is not available)		
2005	2014	Hulley Enterprises Ltd. v. Russian Federation (PCA Case No. AA 226)	\$114 billion sought by 3 investors against the Russian Federation (amount sought by each investor is not available)	Court orders Russia to pay \$50 billion for seizing Yukos assets	Award in favor of Investor
2005	2014	Veteran Petroleum Ltd. v. Russian Federation (PCA Case No. AA 228)	\$114 billion sought by 3 investors against the Russian Federation (amount sought by each investor is not available)	Court orders Russia to pay \$50 billion for seizing Yukos assets	Award in favor of Investor
2005	pending	Ioannis Kardossopoulos v. Georgia (ICSID Case No. ARB/05/18)	US \$350 million	pending; Tribunal has jurisdiction	pending
2006	Pending	Chevron Block Twelve & Chevron Blocks Thirteen and Fourteen v. People's Republic of Bangladesh (ICSID Case No. ARB/06/10)	unknown	pending	pending
2006	pending	Occidental Petroleum Corporation and Occidental Exploration and Production Company v. Republic of Ecuador and Empresa Estatal Petróleos del Ecuador (ICSID Case No. ARB/06/11)	US \$1 billion	pending	pending

2006	pending	Renta 4 et al v Russian Federation (SCC Case No 24/2007)	up to US\$ 40 million	pending; Tribunal has jurisdiction	pending
2006	pending	Chevron Corporation and Texaco Petroleum Corporation v Ecuador	up to US\$ 553 million plus interest	pending; Tribunal has jurisdiction	pending
2006	pending	The Rompetrol Group N.V. v. Romania (ICSID Case No. ARB/06/3)	unknown	pending; Tribunal has jurisdiction	pending
2007	pending	Liman Caspian Oil BV and NCL Dutch Investment BV v. Republic of Kazakhstan (ICSID Case No. ARB/07/14)	unknown	pending	pending
2007	pending	Shell Nigeria Ultra Deep Limited v. Federal Republic of Nigeria (ICSID Case No. ARB/07/18)	at least \$500 million	pending	pending
2007	pending	Ron Fuchs v. Republic of Georgia (ICSID Case No. ARB/07/15)	unknown	pending	pending
2007	pending	ConocoPhillips Petrozuata B.V., ConocoPhillips Hamaca B.V. and ConocoPhillips Gulf of Paria B.V. v. Bolivarian Republic of Venezuela (ICSID Case No. ARB/07/30)	More than \$6 billion	pending	pending
2008	pending	Itera International Energy LLC and Itera Group NV v. Georgia (ICSID Case No. ARB/08/7)	unknown	pending	pending

2008	pending	Perenco Ecuador Limited v. Republic of Ecuador and Empresa Estatal Petróleos del Ecuador (Petroecuador) (ICSID Case No. ARB/08/6)	unknown	pending	pending
2008	pending	Murphy Exploration and Production Company International v. Republic of Ecuador (ICSID Case No. ARB/08/4)	unknown	pending	pending
2008	pending	Burlington Resources, Inc. and others v. Republic of Ecuador and Empresa Estatal Petróleos del Ecuador (Petroecuador) (ICSID Case No. ARB/08/5)	unknown	pending	pending
2008	pending	Caratube International Oil Company LLP v. Republic of Kazakhstan (ICSID Case No. ARB/08/12)	unknown	over US\$ 2 billion	pending
2008	Pending	Repsol YPF Ecuador, S.A. and others v. Republic of Ecuador and Empresa Estatal Petróleos del Ecuador (PetroEcuador) (ICSID Case No. ARB/08/10)	unknown	pending	pending
2009	pending	Mærsk Olie, Algeriet A/S v. People's Democratic Republic of Algeria (ICSID Case No. ARB/09/14)	unknown	pending	pending
2009	pending	Itera International Energy LLC and Itera Group NV v. Georgia (ICSID Case No. ARB/09/22)	unknown	pending	pending
2010	pending	Ascom S.A v. Kazakhstan	unknown	unknown	pending
2010	pending	Oil Tanking GMBH v. Bolivia	unknown	unknown	pending

2010	pending	Pan American Energy LLC v. Plurinational State of Bolivia (ICSID Case No. ARB/10/8)	unknown	unknown	pending
2010	pending	Universal Compression International Holdings S.L.U. v Venezuela (ICSID Case No. ARB/10/9)	up to US\$ 380 million	pending	pending
2011	pending	The Williams Companies, International Holdings B.V., WilPro Energy Services (El Furrial) Limited and WilPro Energy Services (Pigap II) Limited v. Bolivarian Republic of Venezuela (ICSID Case No. ARB/11/10)	unknown	pending	pending
2011	Pending	National Gas S.A.E. v. Arab Republic of Egypt (ICSID Case No. ARB/11/7)	unknown	pending	pending
2011	pending	Mamidoil Jetoil Greek Petroleum Products Societe Anonyme S.A. v. Republic of Albania (ICSID Case No. ARB/11/24)	USD 24 Million	pending	pending
2012	pending	Ampal-American Israel Corporation and others v. Arab Republic of Egypt (ICSID Case No. ARB/12/11)	unknown	pending	pending
2012	pending	Repsol, S.A. and Repsol Butano, S.A. v. Argentine Republic (ICSID Case No. ARB/12/38)	\$10 billion US	pending	pending
1997	1998	Ethyl Corp v. Canada	not less than US\$ 251 million plus interest	case was settled for US\$ 13 million after decision on	settled

				jurisdiction	
2003	2005	Pioneer Natural Resources Company, Pioneer Natural Resources (Argentina) S.A. and Pioneer Natural Resources (Tierra del Fuego) S.A. v. Argentine Republic (ICSID Case No. ARB/03/12)	unknown	case was settled on undisclosed terms	settled
2004	2008	BP America Production Company, Pan American Sur SRL, Pan American Fuegoina, SRL and Pan American Continental SRL v. Argentine Republic (ICSID Case No. ARB/04/8) (consolidated with ICSID Case No. ARB/03/13)	unknown	Tribunal has jurisdiction; settlement reached (terms are unknown)	settled
2006	2008	Técnicas Reunidas, S.A. and Eurocontrol, S.A. v. Republic of Ecuador (ICSID Case No. ARB/06/17)	approx US\$ 35 million	settlement reached in May 2008 and proceedings discontinued	settled
2007	2008	Mobil Investments Canada Inc. and Murphy Oil Corporation v. Canada (ICSID Case No. ARB(AF)/07/4)	approx US\$ 60 million	parties reached a settlement (details of the settlement agreement are not public)	settled
2007	2008	Eni Dación B.V. v. Bolivarian Republic of Venezuela (ICSID Case No. ARB/07/4)	up to US\$ 1 billion	settlement agreed by the parties and proceeding discontinued at the request of the Claimant	settled
2008	2008	AEI Luxembourg Holdings v Bolivia	unknown	settlement reached	settled

2007	2009	Trans-Global Petroleum, Inc. v. Hashemite Kingdom of Jordan (ICSID Case No. ARB/07/25)	US\$ 540 million	claim is only partly manifestly without merit	settled
2012	2012	Slovak Gas Holding BV, GDF International SAS and E.ON Ruhrgas International GmbH v. Slovak Republic (ICSID Case No. ARB/12/7)	unknown	unknown	settled
2007	2014	Mobil Corporation and others v. Bolivarian Republic of Venezuela (ICSID Case No. ARB/07/27)	Over \$10.0 billion	\$1.6 billion	settled
					10
2001	2006	F-W Oil Interests, Inc. v. Republic of Trinidad & Tobago (ICSID Case No. ARB/01/14)	over US\$ 200 million	concluded (award not public)	unknown
2011	pending	Türkiye Petrolleri Anonim Ortakligi v. Republic of Kazakhstan (ICSID Case No. ARB/11/2)	unknown	pending	unknown
2005	unknown	Swiss investor v. South American Govt.	unknown	unknown	unknown
2008	unknown	Tatneft v. Ukraine	US \$1.1 billion	unknown	unknown

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Source: United Nations Conference on Trade and Development (UNCTAD)
http://iiadbcases.unctad.org/cases.aspx?col_year=show, no longer available, a “reduced” version is available at
[http://unctad.org/en/Pages/DIAE/International%20Investment%20Agreements%20\(IIA\)/IIA-Tools.aspx](http://unctad.org/en/Pages/DIAE/International%20Investment%20Agreements%20(IIA)/IIA-Tools.aspx)

Appendix IV - Production Service Agreements and Service Contracts

Figure A.3 and Figure A.4 below demonstrate the distribution of revenue between an IOC and a host government or its national oil company in a Concession or Lease Agreement and a Production Sharing Agreement. In both examples, the price per barrel is \$100. No inference

should be made regarding the split in revenue, because the percentages that the parties negotiate will ultimately determine how much of the revenue each will receive.

In a Concession or Lease agreement, the IOC pays all production costs, receives all residual profits and absorbs all residual losses after paying royalties and taxes to the state. The advantage to the host government is that it will receive income each quarter in the form of royalties whether the project is operating at a loss or a profit. The state's royalty receipts are calculated before operating costs and the state's tax receipts are calculated after operating costs, assuring the state an income stream even if oil prices decline or operating costs increase. This example is a modern form of concession or lease agreement (royalty/tax system) because it contains a large “draw” on gross revenues in the form of taxes.

Figure A.3 – Typical Concession or Lease Agreement (Royalty/Tax)
(\$ per barrel)

	Gross Revenue			
IOC Share	\$100.0		State Share	
	Royalty @ 12%		\$12.00	
	\$88.00			
(\$15.40)	(Operating Cost)			
	\$72.60		Special Oil Tax @ 60%	\$43.56
	\$29.04		Income Tax @ 30%	\$8.71
	\$20.33			
Total	\$20.33	Profit	\$64.27	Total
	24.0%	Percent of Total Net Cash Flow	76.0%	

Source: Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. Chapter 6 (Tulsa, OK: PennWell Corporation, 2011), page 222

Figure A.4 illustrates a typical production sharing agreement (PSA or PSC) with a 10% royalty, a 60/40 profit split (state/IOC), and a 40% tax rate. In principle, royalties should not exist in PSAs

because the state retains ownership of the oil and gas that is produced (reduced only by the IOC's right to the percentage of oil agreed to in the PSA. In this example the IOC's share is \$17.76 of each barrel of oil produced on a successful discovery). Nevertheless, royalties are often a component of PSAs.) It is also common for PSAs to provide that as production increases, the proportion attributable to the State also increases either in an individual year or cumulatively over the production life of the reservoir. This is usually referred to as a "cumulative production sliding scale".^{443 444}

Cost recovery in a PSA is in principle, the deduction of a portion of the oil, so called "cost oil", to compensate the IOC for the capital and operating expenses incurred in finding and producing the oil. If, these costs exceed the specified cost recovery limit, however, expenses are not deductible beyond this specified maximum in the current year. The cost recovery limit is typically stated as a percentage of gross revenues earned during the period (40% in the example below).⁴⁴⁵

Figure A.4 – Typical Production Sharing Agreement (PSA/PSC)
(\$ per barrel)

<u>IOC Share</u>	Gross Revenue	<u>State Share</u>
	\$100.00	
	Royalty @ 10%	\$10.00
	\$90.00	
(\$16.00)	Cost Recovery (18%; 40% Maximum)	
	\$74.00	
	Profit Oil Split @ 60%	\$44.40
	\$29.60	

⁴⁴³ Ibid Chapter 6, page 223

⁴⁴⁴ World Bank Institute, *Guide to Extractive Industries Documents – Oil & Gas*, World Bank Institute Governance for Extractive Industries Program, January 2013, <http://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/World%20Bank%20Extractive%20Industries%20Programme%20-%20Oil%20&%20Gas%20Guide.pdf>

⁴⁴⁵ Andrew Inkpen and Michael H. Moffett, *The Global Oil and Gas Industry – Management, Strategy and Finance*. Chapter 6 (Tulsa, OK: PennWell Corporation, 2011), page 224

		Income Tax @ 40%	\$11.84	
		\$17.76		
	\$17.76	IOC Profit Oil		
Total	\$17.76	Total Net Cash Flow after Cost Recovery	\$66.24	Total
	21.1%	Percent of Total Net Cash Flow	78.9%	

Source: Adapted from Andrew Inkpen and Michael H. Moffett, *The Global Oil & Gas Industry - Management, Strategy and Finance* (Tulsa, OK: PennWell Press, 2011) p. 224

The Evolution of PSAs^{446 447}

The first PSA was introduced in Indonesia in 1966. The evolution of PSAs has been influenced by changing petroleum market conditions and the interpretation of laws and incentives for states and IOCs.

First generation (1966 to 1975)

The state retained ownership of all oil and gas produced, including that oil or gas stored at export terminals. Although there were no royalty rates and taxes applied, the state was guaranteed revenue as a result of a specified profit split, without regard for cost recovery.

Second generation (1976 to 1983)

By 1976, all producing countries were aware of the market value of their oil and gas resources and their increased bargaining power. Consequently, the split of so called “profit oil” was increased to 85/15 (state/IOC), but more flexible cost recovery limits were included in the PSAs to take into account the increasing technical (geological) uncertainty associated with newer exploration prospects.

At that time, under U.S. tax law, payments made by an IOC to an NOC were not considered foreign corporate income taxes. Consequently, payments made to the NOC could not be used as tax credits on the IOC’s U.S. tax return when the IOC remitted its foreign profits to the United States. The Saudi government was the first to realize that if the provisions of the PSA were

⁴⁴⁶ Ibid, page 241-242

⁴⁴⁷ Junseog Yi, “Merits and the Demerits of the Different Types of Petroleum Contracts,” <https://www.google.com/#q=merits+and+demerits+of+the+different+types+of+petroleum+contracts>

modified so that the payments were made to the Saudi government rather than the NOC, the U.S. Internal Revenue Service would classify the payments as foreign taxes, making them eligible for foreign tax credit classification in the United States. This removed a major obstacle to the major U.S. oil companies signing PSAs in other countries.

Third generation (1984 to 1987)

Minor adjustments to investment tax credits, corporate tax obligations, and corporate tax rates increased the sophistication of PSAs, but did not significantly alter the incentives or disincentives to participate in PSA's.

Fourth generation (1988 to present)

After the substantial decrease in oil prices in the mid-1980s, new PSAs included more flexible terms and conditions in order to attract IOCs.

Appendix V - Financial Reporting Quality Indexes

Table A.8 shows the overall and annual financial reporting quality index, capital market development level and sample distribution referred to in section 6.9 Financial Reporting and Operational Transparency. The greater the Overall Financial Reporting Quality Index (OFRQI), the higher the quality of the financial reporting among private sector companies listed on an exchange (e.g. NYSE, NASDAQ, and Euronext).

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Table A.8 – Financial Reporting Quality Index and Ranking

Overall and yearly financial reporting quality index, ranking, capital market development level and sample distribution												
Rank	Capital Market (Stock Exchange)	OFRQI (overall)	CapitalMarket Level	FRQI (yearly)								No. of observati ons
				2000	2001	2002	2003	2004	2005	2006	2007	
1	US (NYSE Euronext New York)	42.49	Developed	40.05 (6)	41.91 (3)	43.52 (7)	36.48 (8)	36.53 (4)	43.12 (1)	47.28 (1)	51.07 (2)	11,119
2	UK (London)	40.91	Developed	46.18 (3)	43.42 (1)	43.40 (8)	36.29 (9)	37.76 (3)	42.09 (3)	42.54 (3)	35.61 (11)	12,379
3	Finland (NASDAQ OMX Helsinki)	40.15	Developed	33.92 (12)	38.10 (10)	36.16 (13)	31.11 (13)	56.23 (1)	40.33 (6)	46.88 (2)	38.47 (7)	1,045
4	Denmark (NASDAQ OMX Copenhagen)	38.72	Developed	48.76 (1)	41.84 (4)	32.26 (19)	48.63 (1)	35.08 (5)	37.79 (8)	34.49 (9)	30.96 (17)	922
5	Australia (Australian)	38.39	Developed	45.53 (4)	39.28 (8)	45.00 (4)	34.99 (10)	30.15 (13)	40.70 (5)	33.35 (11)	38.09 (9)	9,710
6	Japan (Tokyo)	38.22	Developed	37.36 (8)	43.36 (2)	46.83 (3)	39.53 (3)	32.52 (7)	34.26 (10)	36.41 (7)	35.45 (12)	28,513
7	Sweden (NASDAQ OMX Stockholm)	38.13	Developed	39.69 (7)	38.84 (9)	47.34 (2)	37.72 (5)	42.39 (2)	28.62 (21)	40.29 (5)	30.15 (20)	2,391
8	Israel (Tel Aviv)	36.48	Emerging	33.90 (13)	22.97 (29)	57.76 (1)	48.17 (2)	29.80 (15)	27.66 (22)	30.82 (16)	40.76 (5)	1,090
9	Netherlands (Euronext Amsterdam)	36.18	Developed	31.87 (14)	32.14 (15)	44.24 (6)	37.20 (6)	32.40 (8)	37.00 (9)	32.50 (12)	42.08 (4)	1,354
10	Switzerland (SIX Swiss)	35.77	Developed	48.69 (2)	34.52 (13)	39.85 (9)	31.64 (12)	32.14 (9)	33.08 (12)	31.92 (14)	34.31 (14)	1,591
11	Norway (Oslo)	35.29	Developed	36.86 (9)	35.94 (12)	44.48 (5)	38.07 (4)	29.71 (16)	27.20 (23)	33.79 (10)	36.24 (10)	1,248
12	Ireland (Irish)	35.25	Developed	30.32 (16)	40.09 (7)	28.44 (21)	26.05 (23)	31.85 (10)	42.86 (2)	29.35 (18)	53.07 (1)	553
13	Germany (Frankfurt)	32.77	Developed	30.52 (15)	32.59 (14)	33.63 (16)	30.42 (14)	33.53 (6)	30.87 (15)	32.13 (13)	38.44 (8)	5,146
14	Belgium (Euronext Brussels)	31.78	Developed	33.99 (11)	37.74 (11)	32.50 (18)	27.37 (17)	28.48 (17)	29.77 (18)	24.57 (25)	39.80 (6)	806
15	France (Euronext Paris)	31.02	Developed	23.45 (30)	31.58 (16)	38.44 (10)	32.78 (11)	31.44 (11)	30.56 (17)	30.29 (17)	29.61 (21)	5,515
16	Canada (Toronto)	30.89	Developed	36.25 (10)	30.30 (17)	34.38 (15)	26.94 (18)	22.70 (23)	32.62 (14)	31.61 (15)	32.31 (16)	10,605
17	South Africa (Johannesburg)	30.24	Emerging	44.85 (5)	28.53 (18)	24.59 (28)	26.51 (22)	30.66 (12)	41.72 (4)	23.17 (28)	21.91 (30)	2,376
18	Austria (Vienna)	29.80	Developed	23.87 (29)	41.34 (6)	35.55 (14)	27.80 (16)	30.13 (14)	29.27 (20)	22.84 (30)	27.63 (25)	611
19	New Zealand (New Zealand)	29.69	Developed	29.51 (18)	26.41 (22)	26.38 (26)	28.34 (15)	23.20 (22)	29.60 (19)	28.23 (21)	45.86 (3)	698
20	Mexico (Mexican)	29.27	Emerging	29.96 (17)	24.73 (26)	20.20 (34)	26.55 (21)	24.68 (20)	39.97 (7)	38.56 (6)	29.51 (22)	904
21	Italy (Borsa Italiana)	28.38	Developed	25.04 (26)	27.80 (20)	36.24 (12)	26.93 (19)	25.68 (19)	33.80 (11)	20.63 (33)	30.95 (18)	1,840
22	Chile (Santiago)	27.62	Emerging	27.92 (20)	25.11 (24)	28.12 (23)	23.62 (24)	19.23 (27)	24.23 (25)	42.39 (4)	30.31 (19)	1,226
23	Thailand (Thailand)	27.41	Emerging	23.36 (31)	28.34 (19)	32.66 (17)	37.03 (7)	13.80 (32)	23.01 (28)	28.47 (20)	32.59 (15)	3,172
24	Spain (Madrid)	27.10	Developed	24.95 (27)	23.57 (28)	22.40 (32)	22.39 (26)	26.42 (18)	32.66 (13)	29.20 (19)	35.24 (13)	936
25	Philippine (Philippine)	25.67	Emerging	28.67 (19)	41.60 (5)	24.87 (27)	20.69 (29)	21.62 (25)	22.41 (30)	25.69 (22)	19.81 (31)	1,207
26	Taiwan (Taiwan)	24.73	Emerging	24.47 (28)	27.34 (21)	22.03 (33)	15.09 (36)	18.42 (29)	27.09 (24)	34.57 (8)	28.83 (24)	10,031
27	Portugal (Euronext Lisbon)	23.90	Emerging	18.84 (34)	25.06 (25)	37.31 (11)	18.43 (32)	23.83 (21)	16.56 (35)	25.04 (23)	26.12 (26)	445
28	Brazil (BM&FBOVESPA)	22.41	Emerging	15.44 (36)	24.13 (27)	28.07 (24)	20.49 (30)	22.64 (24)	23.21 (27)	21.52 (32)	23.81 (28)	2,395
29	Russia (MICEX)	22.31	Emerging	27.13 (21)	19.97 (34)	19.78 (35)	26.56 (20)	11.71 (35)	20.28 (33)	24.12 (26)	28.94 (23)	577
30	Hong Kong (Hong Kong)	22.10	Developed	23.09 (32)	21.55 (31)	24.51 (29)	23.35 (25)	18.31 (30)	22.99 (29)	20.39 (34)	22.60 (29)	6,034
31	Singapore (Singapore)	21.25	Developed	26.33 (22)	25.97 (23)	27.27 (25)	22.21 (27)	16.27 (31)	15.47 (37)	23.08 (29)	13.42 (35)	4,004
32	Korea (Korea)	20.48	Emerging	22.53 (33)	20.09 (33)	24.13 (30)	16.35 (33)	18.67 (28)	21.31 (32)	21.69 (31)	19.08 (32)	6,773
33	Greece (Athens)	20.09	Emerging	10.98 (37)	18.53 (35)	28.71 (20)	19.06 (31)	21.17 (26)	30.62 (16)	17.76 (35)	13.90 (34)	2,169
34	Pakistan (Karachi)	20.06	Emerging	26.06 (23)	15.99 (37)	18.82 (37)	22.20 (28)	3.89 (38)	23.83 (26)	24.96 (24)	24.74 (27)	793
35	Malaysia (Bursa Malaysia)	19.26	Emerging	25.32 (25)	21.15 (32)	19.56 (36)	16.15 (35)	10.82 (37)	21.69 (31)	23.43 (27)	16.00 (33)	6,209
36	Indonesia (Indonesia)	17.52	Emerging	26.00 (24)	22.36 (30)	23.92 (31)	13.65 (37)	12.88 (33)	16.71 (34)	17.33 (36)	7.34 (38)	2,007
37	India (Bombay)	16.34	Emerging	17.18 (35)	16.07 (36)	28.18 (22)	16.23 (34)	12.86 (34)	13.11 (38)	14.28 (38)	12.80 (36)	6,536
38	China (Chinese Mainland)	12.18	Emerging	9.93 (38)	12.74 (38)	16.55 (38)	6.51 (36)	11.23 (36)	16.22 (37)	15.65 (37)	8.62 (37)	11,973
Total												
Minimum		12.18		9.93	12.74	16.55	6.51	3.89	13.11	14.28	7.34	445
Maximum		42.49		48.76	43.42	57.76	48.63	56.23	43.12	47.28	53.07	28,513
Mean		28.95		29.70	29.55	32.06	27.36	25.29	29.06	28.98	29.64	4,392
Median		29.48		28.30	28.07	30.48	26.74	25.18	29.43	28.84	30.23	2,088
Std. Dev.		7.75		9.67	8.75	9.73	9.35	10.20	8.47	8.34	10.88	5,452

Source: Qingliang Tang, Huifa Chen and Zhijun Lin, "How to measure country level financial reporting quality," *Social Sciences Research Network* (May 18, 2012) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2114810

Appendix VI - Accounting Terminology and Classification

Under the rules of United States Generally Accepted Accounting Principles (U.S. GAAP) company expenditures for assets with a useful life of more than one year are classified and recorded as capital additions. This includes property, equipment and infrastructure whether

acquired by direct purchase, through the acquisition of another company or participation in a joint venture. The oil and gas industry frequently uses the more inclusive term CAPEX which is the sum of capital additions (which are capitalized on the balance sheet) and exploration expenses (which are expensed on the income statement in the period in which they occur). For example in the Notes to ExxonMobil's 2013 Summary Annual Report, the company defines CAPEX as:

“...the combined total of additions at cost to property, plant and equipment and exploration expenses on a before-tax basis from the Summary Statement of Income. ExxonMobil's CAPEX includes its share of similar costs for equity companies [companies less than 50% owned]. CAPEX excludes assets acquired in nonmonetary exchanges (effective 2013) and depreciation on the cost of exploration support equipment and facilities recorded to property, plant and equipment when acquired”⁴⁴⁸.

Loans made in exchange for oil or gas are not a part of CAPEX, nor are mergers between companies. The term transaction is another grouping of expenditures used in the news media, but has no meaning in U.S. GAAP or IFRS.

Figure A.5 below shows that the financial figures reported by the news media, industry databases and oil and gas companies (IOCs and NOCs) overlap each other. Global CAPEX in the oil and gas exploration and development sector were \$682 billion in 2013,⁴⁴⁹ represented by the largest circle and includes specifically identified capital projects, the large amount of capital expenditures that are not publically identified with a specific project, acquisitions and joint ventures.

In 2013, the total value of *reported* oil and gas transactions was \$337 billion, but by definition this figure excludes all the transactions the value of which are not disclosed.⁴⁵⁰ Transactions are therefore, a “potpourri” of deals that include specific capital expenditures, acquisitions, joint ventures, loans for oil deals and mergers that are made public in some way, but excludes a large

⁴⁴⁸ ExxonMobil, 2013 Summary Annual Report (2014) p. 44,

<http://nasdaqomx.mobular.net/nasdaqomx/7/3395/4843/>

⁴⁴⁹ Barclays, “Global 2014 Capital Spending Outlook,” (December 9, 2013)

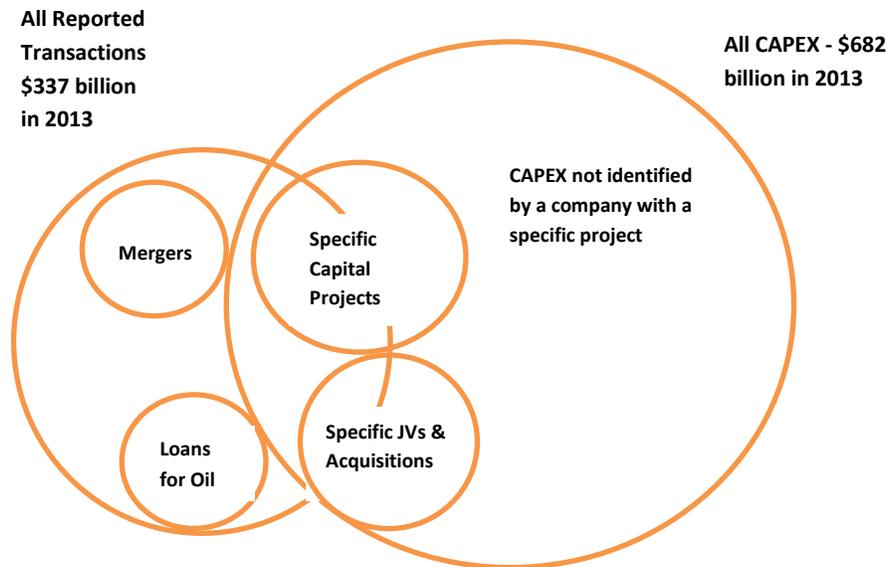
<http://www.pennenergy.com/content/dam/Pennenergy/online-articles/2013/December/Global%202014%20EP%20Spending%20Outlook.pdf>

⁴⁵⁰ E&Y, “Global Oil and Gas Transactions Review 2013,”

[http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/\\$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf)

number of transactions not identified with a specific expenditure or deal.

Figure A.5 - Relationship between Various Measures of Expenditures 2013



These technical distinctions are only distantly related to the politics and economics of the oil and gas industry, but demonstrate the importance of developing and using a consistent measure of expenditures. CAPEX is the term most often used in understanding investment trends in the oil and gas industry and the one that is used throughout this study.

Appendix VII - Loans for Oil Agreements

This section presents a list of Loans for Oil Deals from 2006 to the 2014. Loans for oil financing continued in 2013 (\$89 billion) and in 2014 (\$463.2 billion, as of June 1, 2014). Of the \$89 billion in loans for oil or natural gas that occurred in 2013, \$85 billion is accounted for by one transaction that extends over 10 years. Of the \$463.2 billion loans for oil or gas that occurred in 2014, \$456 billion is accounted for by one transaction between Russia and China that extends over 30 years. These transactions usually involve a long term supply agreement in which, the country producing the oil or gas immediately receives loans from the other country for the purpose of developing natural resources and infrastructure. The country making the loan is repaid by delivery of gas or oil over a specified period.

Table A.9 - Loans for oil Deals between 2006 and 2014.

2006 - (1) China and Nigeria signed a \$4 billion agreement for oil and infrastructure projects; an agreement that includes four drilling licenses for China.

(2) Separately, the China National Offshore Oil Corporation (CNOOC) purchased 45 percent of an oil exploration block off the coast of Nigeria for \$2.3 billion.⁴⁵¹

2007 - The Japan Bank for International Cooperation (JBIC) signed a \$3 billion loan deal with the Abu Dhabi National Oil Company (ADNOC) to increase the firm's supply capacity so that the United Arab Emirates (UAE) can continue providing oil exports to Japan.⁴⁵²

2008 - The Venezuelan Economic and Social Development Bank (BANDES) and *Petroleos de Venezuela SA* (PDVSA) signed a \$4 billion loan for oil deal with China Development Bank (CDB). The loan was intended to fund infrastructure and other development projects.⁴⁵³

2009 - (1) Ecuador's national oil company, Petroecuador, signed a \$1 billion loan for oil deal with PetroChina, a subsidiary of the Chinese National Petroleum Company (CNPC) in the form of an advance payment for oil to be delivered later.⁴⁵⁴

(2) Venezuela's BANDES and PDVSA signed a \$4 billion loan for oil deal with China Development Bank for infrastructure development.⁴⁵⁵

02/18-24/2009 - China and Russia agreed on terms of a loan from the China Development Bank to Russian state oil exporter *Rosneft* for \$15 billion and pipeline company *Transneft* for \$10

⁴⁵¹ Michail Vafeiadis, "China 'buying out' Africa: Top 5 destinations of Chinese money The Christian Science Monitor," (March 1, 2012)

<http://www.csmonitor.com/World/2012/0301/China-buying-out-Africa-Top-5-destinations-of-Chinese-money/Nigeria>

⁴⁵² Jake Simpson, "JBIC Loans \$3B to Buoy UAE-Owned Oil Co. Upstream Growth," *Law 360*, New York, (February 8, 2012) <http://www.law360.com/articles/413892/jbic-loans-3b-to-buoy-uae-owned-oil-co-upstream-growth>

⁴⁵³ Kevin P. Gallagher, Amos Irwin, Katherine Koleski, "The New Banks in Town: Chinese Finance in Latin America Inter-American Dialogue," (February 2012)

<http://ase.tufts.edu/gdae/Pubs/rp/GallagherChineseFinanceLatinAmericaBrief.pdf>

⁴⁵⁴ *Ibid*

⁴⁵⁵ *Ibid*

billion, to finance crude oil shipments over a 20-year period of not less than 241,000 barrels per day (15 million tons per year).⁴⁵⁶

04/18/2009 - State-owned China National Petroleum Corp. agreed to lend Kazakhstan's national energy company *KazMunaiGas* \$5 billion and to join with *KazMunaiGas* to buy Kazakh oil and gas producer *MangistauMunaiGas* from Indonesia's Central Asia Petroleum Ltd. The Export-Import Bank of China agreed to provide an additional \$5 billion to Kazakhstan as part of the package.⁴⁵⁷

2010 - (1) Ecuador's Petroecuador signed a loan for oil agreement with China Development Bank (20% for oil related investments and 80% for infrastructure investments and other discretionary investments).⁴⁵⁸

(2) China and Nigeria signed a \$23 billion agreement for China to build three oil refineries and a fuel complex in Nigeria.⁴⁵⁹

09/2010 - (1) Ghana and China signed project loans and another deal, totaling \$15 billion. The China Export Import Bank and the government of Ghana signed a \$10.4 billion concessionary loan agreement for various infrastructure projects, payable over 20 years. A separate loan of \$3 billion, from the China Development Bank, was intended for Ghana's expanding oil-and-gas sector. The China Development Bank also guaranteed more than \$400 million for water projects and what it called e-governance projects in Ghana.

(2) Separately, Ghana signed an agreement valued at \$1.2 billion with the Chinese company Bosai Minerals Group to build a bauxite and aluminum refinery in Ghana over four years. Bosai Minerals will purchase 80% of the shares in Ghana Bauxite Co.⁴⁶⁰

⁴⁵⁶ John Helmer, "China loan turns Russian Oil East," *Asia Times On Line*, http://www.atimes.com/atimes/Central_Asia/KB24Ag01.html

⁴⁵⁷ Jing Yang and Victoria Ruan, "China, Kazakhstan Sign Loan-for-Oil Deal" *The Wall Street Journal* (Updated April 18, 2009)

<http://online.wsj.com/news/articles/SB123996097676128865>

⁴⁵⁸ Kevin P. Gallagher, Amos Irwin, Katherine Koleski, "The New Banks in Town: Chinese Finance in Latin America Inter-American Dialogue," (February 2012)

<http://ase.tufts.edu/gdae/Pubs/rp/GallagherChineseFinanceLatinAmericaBrief.pdf>

⁴⁵⁹ Michail Vafeiadis, "China 'buying out' Africa: Top 5 destinations of Chinese money" *The Christian Science Monitor* (March 1, 2012)

<http://www.csmonitor.com/World/2012/0301/China-buying-out-Africa-Top-5-destinations-of-Chinese-money/Nigeria>

2011 - (1) Venezuela's PDVSA signed another \$4 billion loan for oil deal with China Development Bank for infrastructure construction.⁴⁶¹

(2) Ecuador's government signed a \$2 billion loan for oil deal with China Development Bank, 30% for oil development and 70% for discretionary infrastructure spending.⁴⁶²

07/03/2011 - Ecuador was in the final stages of negotiations with a Chinese bank for a \$571 million loan; and state oil company, Petroecuador, signed a deal to sell oil to the Chinese energy company, PetroChina.⁴⁶³

12/16/2011 - Venezuela's PDVSA signed another \$4 billion loan for oil deal with Industrial and Commercial Bank of China (ICBC) for housing development in Venezuela⁴⁶⁴ bringing the total amount owed by Venezuela to \$30 billion, which was secured by Venezuela's future oil production.⁴⁶⁵

03/12/2012 - PDVSA announced that Citic Group Corp., China's largest state-owned investment company, would acquire a 10 percent stake in the Petropiar heavy-crude project held with PDVSA and Chevron Corp. It also said that the China Development Bank would spend \$4 billion to help boost production in a joint venture with China National Petroleum Corp. (CNPC). The Chinese bank and the Venezuelan government also agreed to renew a \$6 billion bilateral investment fund, of which \$2 billion was intended to increase PDVSA's oil production.⁴⁶⁶

⁴⁶⁰ Reuters, "China extends Africa push with loans, deal in Ghana" (September 2010)

<http://ghanaoilonline.org/2010/09/china-extends-africa-push-with-loans-deal-in-ghana/>

⁴⁶¹ Kevin P. Gallagher, Amos Irwin, Katherine Koleski, "The New Banks in Town: Chinese Finance in Latin America Inter-American Dialogue," (February 2012),

<http://ase.tufts.edu/gdae/Pubs/rp/GallagherChineseFinanceLatinAmericaBrief.pdf>

⁴⁶² Ibid

⁴⁶³ Reuters, "Ecuador negotiates China bank loan, signs oil deal,"

Taipei Times (July 3, 2011) <http://www.taipetimes.com/News/biz/archives/2011/07/03/2003507255>

⁴⁶⁴ Ibid

⁴⁶⁵ Los Angeles Times, "China's Venezuela presence grows with loan-for-oil deal," (December 16, 2011)

http://latimesblogs.latimes.com/world_now/2011/12/china-venezuela-loan-oil.html

⁴⁶⁶ Kelly Hearn, "Venezuelan oil a risky investment for China," *The Washington Times*, (March 12, 2012)

<http://www.washingtontimes.com/news/2012/mar/12/venezuelan-oil-a-risky-investment-for-china/#ixzz31tLhnzrl>

04/28/2012 - (1) China agreed to provide South Sudan \$8 billion in development loans over the next two years. The loans were to be used for road construction, agriculture, hydroelectricity, infrastructure and telecommunications, which would be built by Chinese companies.⁴⁶⁷

12/24/2012 - OAO Rosneft signed two loan agreements for \$16.8 billion with international banks to buy BP Plc's half of TNK-BP. OAO Rosneft also agreed on a prepaid oil supply deal with traders Glencore International Plc (GLEN) and Vitol Group to finance its \$55 billion acquisition of TNK-BP.⁴⁶⁸

02/08/2013 - The Japanese Bank for International Cooperation and three Japanese lenders agreed to loan the state-owned oil company of the United Arab Emirates approximately \$3 billion to advance the UAE's upstream development. The Japanese bank made the loan with three other Japanese banks: Bank of Tokyo-Mitsubishi UFJ Ltd., Sumitomo Mitsui Banking Corp. and Mizhuo Corporate Bank Ltd.⁴⁶⁹

05/22/2013 - Essar Energy, the London listed parent of Essar Oil, signed a three-way debt financing deal with China Development Bank (CDB), the country's largest overseas lender, and PetroChina to raise \$1 billion of external commercial borrowings (ECBs). The financing cooperation agreement also included a guaranteed product "offtake" by PetroChina.⁴⁷⁰

07/10/2013 - Nigerian President Goodluck Jonathan and Chinese President Xi Jinping signed an agreement to facilitate \$1.1 billion in low-interest loans for infrastructure in Nigeria. China was offering Nigeria loans to help fund airport terminals in four cities, roads, light-rail line for its

⁴⁶⁷ Jared Ferrie, "China to Loan South Sudan \$8 Billion for Infrastructure Projects," *Bloomberg News* (Apr 28, 2012) <http://www.bloomberg.com/news/2012-04-28/china-to-loan-south-sudan-8-billion-for-infrastructure-projects.html>

⁴⁶⁸ Jake Rudnitsky, "Rosneft Clinches Oil Deal, \$16.8 Billion Loans for TNK-BP," *Bloomberg*, (December 24, 2012) <http://www.bloomberg.com/news/2012-12-24/rosneft-agrees-to-five-year-oil-supply-deal-with-glencore-vitol.html>

⁴⁶⁹ Jake Simpson, "JBIC Loans \$3B to Buoy UAE-Owned Oil Co. Upstream Growth," *Law 360*, New York (February 8, 2012) <http://www.law360.com/articles/413892/jbic-loans-3b-to-buoy-uae-owned-oil-co-upstream-growth>

⁴⁷⁰ The Economic Times, "Essar signs oil-for-loans deal with CDB, PetroChina to raise \$1 billion ECBs," (May 22, 2013) http://articles.economictimes.indiatimes.com/2013-05-22/news/39445340_1_china-development-bank-vadinar-essar-oil

capitol, a hydro-electric power plant and oil and gas infrastructure. This loan was one part of a \$3 billion loan for oil agreement.⁴⁷¹

10/16/2013 - Turkmenistan's state company *Turkmengaz* and the China Development Bank signed a cooperation agreement for financing the second phase of development at *Galkynysh* field through an undisclosed loan to the Turkmen government. *Turkmengaz* and China National Petroleum Corporation (CNPC) also signed a contract for the purchase and sale of 25 billion cubic meters of natural gas to China and a contract for the design and construction of an upstream complex with a capacity to produce 30 billion cubic meters of additional natural gas sales.⁴⁷²

10/22/2013 - Russia and China signed 21 trade agreements, valued at \$85 billion, including a new 100 million ton oil supply deal with China's Sinopec. Rosneft will supply China with up to 100 million tons of crude oil over 10 years and Rosneft will export through China's Sinopec.⁴⁷³

02/14/2014 - Venezuela's state oil company PDVSA and Spanish oil firm Repsol completed a \$1.2 billion financing agreement to increase output at the *Petroquiriquire* joint venture. The deal would increase output to approximately 65,000 barrels per day (bpd) from 50,000 bpd.⁴⁷⁴

04/30/2014 - According to figures from the China-Latin America Finance Database (a joint effort between the Inter-American Dialogue, a think-tank, and Boston University), China committed almost \$100 billion to Latin America between 2005 and 2013. The largest amounts have come from the China Development Bank (CDB). More than half of China's lending to Latin America has been made to Venezuela. Chinese lenders committed approximately \$15 billion in 2013 alone.⁴⁷⁵

⁴⁷¹ Associated Press, "Nigerian president in China to finalize loan deals" (July 2013)
<http://news.yahoo.com/nigerian-president-china-finalize-loan-deals-111649396.html>

⁴⁷² Tavus Rejepova, "Turkmenistan, China Reach New Energy Deals Field Reports," *CACI Analyst* (October 16, 2013) <http://www.cacianalyst.org/publications/field-reports/item/12834-turkmenistan-china-reach-new-energy-deals.html>

⁴⁷³ RT, "Russia and China strengthen trade ties with \$85 billion oil deal," (October 22, 2013)
<http://rt.com/business/rosneft-china-sinopec-oil-537/>

⁴⁷⁴ Reuters, "Venezuela Signs \$1.2B Loan from Repsol for Joint Oil Deal"
http://www.rigzone.com/news/oil_gas/a/131641/Venezuela_Signs_12B_Loan_From_Repsol_For_Joint_Oil_Deal

⁴⁷⁵ Law in Action, "News on Environment, Rule of Law, Human Rights The Thirst for Commodities: loans-for-oil deals," (April 30, 2014)

05/16/2014 - Brazilian state-controlled company, Petrobras, signed a contract finalizing a 10 year, \$10 billion loan from China Development Bank Corp.⁴⁷⁶

05/21/2014 - Russia agreed to supply China with natural gas for 30 years beginning in 2018 under an agreement that has taken 10 years to negotiate. Russia's state-owned gas company, *Gazprom*, signed the deal with the China National Petroleum Corporation (CNPC) during a visit by Russian President Vladimir Putin to Shanghai. Under the deal, *Gazprom* will supply 38 billion cubic meters of gas to China each year, with the possibility of increasing shipments to 60 billion cubic meters per year. The Russian Ministry of Energy declined to comment on the price China will pay for the natural gas, but the value of the 30 year deal was estimated to be \$456 billion.⁴⁷⁷

Whether the size and pace of loans for oil and gas will continue is uncertain, but it has been an important source of financing for developing countries.

Appendix VIII - Major Transactions in 2013

This appendix presents the largest transactions made in the upstream sector of the oil and gas industry in 2013. Since the number of major transactions that occur each year averages between 1,500 and 1,800, it is clear that the list in Table A.10 is not complete but it demonstrates the liquidity of the market for oil and natural gas properties and the diversity of transactions and partners.

Table A.10 - Major Upstream Transaction in 2013

Africa

- ONGC and Oil India's acquired Videocon's 10% equity stake in Area 1 in Mozambique.
- Pavilion Energy was expected to complete a 20% interest in deep-water Tanzanian Blocks 1, 3 and 4 for \$1.3 billion from Ophir Energy.
- Petrobras "farmed out" some of its equity interest in two exploration stage assets offshore Tanzania to Shell and Statoil.

<http://www.alphabetics.info/international/2014/04/30/loans-for-oil-china-to-latin-america/>

⁴⁷⁶ Latin American Herald Tribune, "Petrobras Signs \$10 Billion Loan Deal with China," (May 16, 2014)

<http://www.laht.com/article.asp?ArticleId=346784&CategoryId=13280>

⁴⁷⁷ Alanna Petroff, "Russia to supply China with gas for 30 years, *CNNMoney* (May 21, 2014)

http://money.cnn.com/2014/05/21/news/russia-china-gas/index.html?iid=HP_Highlight

- Oil discoveries in Kenya by Tullow and Africa Oil attracted other dealmakers into Kenya and the promising geology and proximity to current discoveries resulted in a small number of deals in Madagascar.
- In a pan-African deal, Petrobras “farmed out” 50% of its interests in Angola, Benin, Gabon, Namibia, Tanzania and Nigeria to Brazilian investment bank *BTG Pactual* for \$1.5 billion.
- Other large deals in the region included Marathon Oil’s exit from two Blocks in Angola, selling its 10% interest in each to Sonangol Sinopec International and Sonangol for \$1.5 billion and \$600 million, respectively.
- In Algeria, state-owned Sonatrach exercised its pre-emption right to acquire 18.375% in Petoceltic’s Isarene development.

Asia

- China acquired Petrobras’ assets in Peru for \$2.6 billion.
- China acquired of a 25% stake in the West Qurna field in Iraq from ExxonMobil.
- Sinopec acquired a 33.33% interest in Apache’s Egypt’s oil and gas assets for U.S. \$3.1 billion.
- Sinopec’s acquired Marathon’s 10% stake in Angola.
- CNPC’s acquired a 20% interest in the Yamal LNG project.
- Sinochem’s acquired a 40% interest in Pioneer Natural Resources shale properties.
- China Development Bank/Petro China signed a loan for oil deal with Petroecuador.
- Japan Bank for International Cooperation signed a loan agreement for \$3 billion with Abu Dhabi National Oil Company.
- Temasek (based in Singapore) invested \$2.3 billion in Repsol, acquiring 5.4% of its treasury shares.
- Japex (34% Japan state owned) acquired 10% interest in Progress Energy’s North Montney gas assets and the LNG plant that it is developing in Prince Rupert.
- Pertamina (Indonesian NOC) and PTT (Thailand NOC) jointly acquired Hess’s Indonesian assets for \$1.3 billion.
- Petronas (Malaysian NOC) acquired natural gas assets from Talisman for \$1.4 billion.

Australia

- Chevron agreed to invest up to \$349 million in two stages in two of Beach Energy's prospective permits (PEL 218 and ATP 855).
- In Papua New Guinea, Total SA, Santos and Osaka Gas began acquiring stakes in emerging onshore gas fields to position themselves for the next round of gas projects as ExxonMobil's PNG LNG project moved toward completion and the production of first gas in 2014.

Canada

- Centrica plc and Qatar Petroleum's acquired Suncor Energy's producing conventional gas assets for \$986 million.
- ConocoPhillips sold its 100% interest in the undeveloped Clyden oil sands leasehold located in Alberta's Athabasca oil sands region to Imperial Oil and ExxonMobil for \$720 million.
- A group of institutional investors acquired a 6.5% stake in Canadian Oil Sands Ltd., including its Alberta oil sands Syncrude Project, from Newmont Mining Corporation for \$710 million.
- PKN Orlen SA's acquired the publicly traded E&P Company, TriOil Resources Ltd, for a total transaction value of \$244 million. This was Poland's first venture into the Canadian energy market.
- CNOOC acquired Canadian oil-sands operator Nexen Inc. for \$5.2 billion.⁴⁷⁸

Russia and the Commonwealth of Independent States (CIS)

- Activity in this region was dominated by the crude oil supply deal between *Rosneft* and the Chinese NOC, CNPC valued at \$60 billion.
- *Rosneft* acquired the remaining 49% share in ITERA Oil and Gas Company LLC for \$2.9 billion.
- *Rosneft* (through its new subsidiary ITERA Oil and Gas Company LLC) completed the acquisition of a 40% stake in Arctic Russia BV from Enel for cash consideration of \$1.8 billion. Arctic Russia BV owns 49% of the share capital in *SeverEnergiya* which owns licenses in four large oil and gas fields (*Samburgskoye, Yaro-Yakhinskoye, Yevo-Yakhinskoye* and

⁴⁷⁸ Carolyn King, "CNOOC Purchase of Nexen Is Approved by U.S.," *The Wall Street Journal*. www.online.wsj.com, (February 12, 2013)

Severo-Chaselskoye) in the Yamal-Nenets Autonomous Region of Russia. The aggregated interest of *Rosneft* in *SeverEnergia* is 19.6% (.49 x .40).

- *Rosneft* signed the Completion Deed for Russian offshore blocks in the Barents Sea and the Sea of Okhotsk, confirming agreements on the Arctic shelf exploration with Statoil and Eni.
- *Rosneft* acquired the remaining 65% stake of *Taas-Yuriakh Neftegazodobycha LLC* for more than \$2 billion.
- NOVATEK sold a 20% stake in the *Yamal LNG* project to CNPC.
- LUKOIL purchased a 100% stake in *Samaranafta*, an exploration and production unit operating in the Volga region, from Hess Corporation for \$2.1 billion.
- LUKOIL also acquired the remaining 50% of the shares of *Kama-oil*, operating in the Volga region containing oil reserves of 12.8 million tons, for \$400 million, increasing its ownership to 100%.
- *Rosneft* signed an agreement with *Corporacion Venezolana de Petroleo*, a subsidiary of PDVSA, to create a joint venture to develop heavy oil reserves in Venezuela as part of the Carabobo-2 project.
- *Rosneft* also acquired a 30% interest in 20 deep-water exploration blocks in the Gulf of Mexico held by ExxonMobil.
- LUKOIL and *Rosneft* were awarded licenses on the Norwegian continental shelf in the Barents Sea (30% and 20%, respectively).
- Transaction volumes and the number of deals increased significantly in Kazakhstan. The deals that were disclosed were valued at more than \$11 billion. The cornerstone of this initiative was CNPC's entry into the Kashagan offshore project. CNPC acquired an 8.33% stake for \$5.4 billion from *KazMunaiGas*, which had earlier acquired ConocoPhillip's stake in the project.

Europe

- The largest North Sea transaction was OMV's \$2.65 billion purchase of a portfolio of UK and Norwegian assets from Statoil.
- Canadian company, Ithaca Energy, acquired Valiant Petroleum in a deal valued at close to \$500 million, and Spike Exploration (backed by Norwegian PE) acquired Bridge Energy for approximately \$200 million.

India

- There were three large outbound transactions by OVL and OIL totaling \$5.6 billion. Of these, two transactions involved acquiring a 20% interest (10% each from Anadarko and Videocon) in the Rovuma Area 1 Offshore Block in Mozambique. The other large transaction involved OVL's exercise of its pre-emption rights to increase its interest in the BC-10 heavy oil offshore concession in Brazil.

Latin America and the Caribbean

- The largest deals of the year included: PetroChina and CNPC's acquisition of assets in Peru and Ecuador; Pacific Rubiales purchase of regional independent *Petrominerales*; ONGC Videsh's purchase of assets in Brazil from Petrobras; and Chevron's purchase of a stake in YPF SA in the Argentina.

United States

- Two of the largest deals in the upstream sector included: Devon Energy's acquisition of GeoSouthern Energy for \$6 billion; and Fieldwood Energy's acquisition of producing assets of in the Gulf of Mexico from Apache Corporation for \$3.75 billion.
- Chesapeake and Chinese state-owned oil company China Petrochemical Corp. (Sinopec) announced an agreement in which Sinopec would purchase a 50% undivided interest in 850,000 leasehold acres controlled by Chesapeake Energy in northern Oklahoma.⁴⁷⁹
- Pioneer Natural Resources agreed to sell a 40% interest in some of its West Texas Wolfcamp Shale reserves in the Permian Basin to a U.S. subsidiary of Chinese company Sinochem Group, for \$1.7 billion. Sinochem paid Pioneer \$500 million in cash when the joint venture closed and the remaining \$1.2 billion by carrying 75% of Pioneer's share of future drilling costs, until the \$1.2 billion drilling carry is utilized. Pioneer would continue as the operator of the properties.

Source: E&Y, Global Oil and Gas Transaction Review 2013,
[http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/\\$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_transactions_review_2013/$FILE/EY-Global_oil_and_gas_transactions_review_2013.pdf)

⁴⁷⁹ Chesapeake Energy Corporation Press Release, "Chesapeake Energy Corporation Announces \$1.02 Billion Mississippi Lime Joint Venture," (Feb. 25, 2013) <http://www.chk.com/news/articles/Pages/1788571.aspx>

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