



# CONFERENCE REPORT: World Bank Conference on Oil and Gas in Federal Systems

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This report is intended to summarize the proceedings of the Conference on Oil and Gas in Federal Systems, organized by World Bank's Oil, Gas, and Mining Policy Division and the Forum of Federations, with co-sponsorship from NORAD. Background papers and presentation material presented during the Conference can be downloaded from our website <http://go.worldbank.org/FK72MC3ET1> . The report was prepared by Noora Arfaa (Consultant) and Silvana Tordo (Lead Energy Economist, and Task Leader of the Conference) both from the Oil, Gas, and Mining Policy Division of the World Bank. The manuscript of this report has not been prepared in accordance with the procedures appropriate to formally edited texts. Some sources cited in this report may be informal documents that are not readily available.

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# I. INTRODUCTION

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The World Bank's Oil, Gas, and Mining Policy Division (COCPD) and the Forum of Federations, with co-sponsorship from NORAD, hosted a conference on *Oil and Gas in Federal Systems* at World Bank headquarters in Washington, DC on March 3 -4, 2010. The two-day conference was dedicated to exploring the particular political, economic, and social challenges arising from the exploitation of petroleum resources in federal systems. The event provided a platform for dialogue and debate among a wide variety of prominent experts from government, academia, and the development community on major development and public finance issues that are common to federal and decentralized petroleum-producing countries.

This report provides an overview of the proceedings with a view to distilling some of the initial lessons learned from the conference. It is organized as follows: Section I includes background information on the conference; Section II summarizes the key messages from each session; and Section III draws initial conclusions and suggests possible next steps.

## A. Background

The term "resource curse" has become a popular expression to symbolize one side of the potential impact of natural resource wealth on a country. While the impact need not be negative, there is no denying that managing significant resource wealth is a major challenge, even for advanced economies. The relevance of this issue is reflected in the large literature on various aspects of non-renewable resource management, including fiscal and environmental regimes, transparency and accountability.

Approximately 40 percent of proved reserves and 50 percent crude oil production comes from federal states (and similar percentages apply to natural gas). Moreover the issue is relevant in a number of other countries which are debating decentralized or federal models (such as Peru, Ecuador, Columbia, and Bolivia, and in formally unitary systems that have adopted asymmetric models of decentralized governance (such as the UK and Indonesia). Despite the relevance of oil and gas resources in federations, there has been surprisingly little structured focus on the particular political, economic, and social challenges that their exploitations entails in these systems.

The political significance of the oil and gas sector in any given country depends on the structure of the economy. Thus oil and gas is central to the economies of Nigeria and Iraq, and very relevant to those of Russia, Venezuela and Sudan. The recent sharp increase in oil prices (and to a lesser extent gas prices), followed by their sudden decrease amplified by the financial crisis, have added to the importance of this sector, in some cases accentuating tensions between national and sub-national governments over the control and management of petroleum resources and the sharing of benefits derived from their exploitation.

In addition to being uncertain, volatile, and temporary, petroleum resources are typically spatially concentrated. Especially in unitary and federal countries with limited economic diversification, the spatial concentration of oil and gas deposits raises issues of economic growth and regional balance, and in some cases may affect national integrity and political stability.

As governments in resource-rich countries decentralize and pass windfalls, and related budgeting authority to sub-national governments, the challenge is the sudden volatility of revenue inflows at local and sub-national levels. Without careful management, increased extractive revenues can actually worsen the circumstances in

states and provinces by undermining other economic sectors, reducing government's accountability to citizens, and increasing corruption and conflict.

## **B. Organization of Conference**

The conference drew on material from the Forum of Federations' on-going research on this topic which included 10 country case studies, as well as existing and on-going work by the World Bank and other organizations on issues related to the management of petroleum resources in federal and decentralized systems. The conference was structured around the following themes: 1) *Ownership and Control of the Resources*; 2) *Macroeconomic Management Issues*; 3) *Raising and Sharing Revenue*; 4) *Centralized versus Decentralized Petroleum Sector and Revenue Management*; and 5) *Accountability and Transparency*, each illustrated by case studies.

The event also featured four prominent keynote speakers: Otaviano Canuto dos Santos Filho (Vice President and Head of the Poverty Reduction and Economic Management (PREM) Network, World Bank) provided a brief overview of the World Bank's work on natural resource management and decentralization; Daniel Yergin (President of Cambridge Energy Associates and author of numerous books on the oil industry) focused his remarks on emerging trends in energy markets; Nicholas Haysom, (Director of Political Affairs Office of the Secretary General, United Nations) shared his experience on the role of natural resources in peace negotiations; and Peter Cameron (Professor of International Energy Law and Policy and Director of Research at the CEPMLP, University of Dundee) made interesting remarks on managing the politics of oil reforms based on his experience in Iraq.

Nearly 120 people participated in the conference, with representation across a variety of organizations including multilateral and bilateral institutions, government agencies, and civil society. Active participation from the audience was central to achieving the objectives of the conference.

## II. CONFERENCE PROCEEDINGS

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### A. Day 1 – Opening Session

**Opening Address:** Otaviano Canuto (Vice President and Head of the Poverty Reduction and Economic Management Network, World Bank) outlined the most common political, economic, and social challenges that oil-producing federal states face in managing petroleum resources, and the support that World Bank Group provides in this area. Based on the Bank's experience, there is clearly not a "one-size-fits-all" model of resource management, although common feature of good practice can be identified.

Sub-national issues are becoming increasingly important to the World Bank's policy dialogue and lending operations in client countries. This interest parallels the increase in fiscal responsibilities of sub-national governments and the evolving trend toward decentralization in both federal and unitary countries. Through the Poverty Reduction and Economic Management Network (PREM) and the Oil, Gas, and Mining Policy Division (COCPD), and active collaboration with other donors and interested stakeholders, the World Bank aims to ensure that extractive industries contribute to poverty alleviation and economic growth through the promotion of good governance and sustainable development. Several initiatives have been taken to improve the Bank's capacity to proactively provide policy guidance and assist member countries with the implementation of such policies. The creation of the Decentralization and Sub-national Thematic Group is part of an effort to share information and to bring about informed, consistent, and comprehensive approach to decentralization and sub-national development. In addition, COCPD provides sector specific technical advice, and carries out an important role through its management of several global programs and partnerships, such as the Extractive Industry Transparency Initiative (EITI) and the Petroleum Governance Initiative (PGI), a bilateral collaboration with the Government of Norway that provides support for improved governance in extractive industries.

**Keynote Address: The New World of Energy** Daniel Yergin (President, Cambridge Energy Associates) focused his remarks on emerging trends in energy markets. *He noted that the 20<sup>th</sup> century was considered the century of oil, and invited reflection on whether this would still be the case for the 21<sup>st</sup> century. Will oil and gas continue to have as much prominence had it as in the past or will this be the century of innovation in the energy sector? To help answer this question, the following trends should be considered:*

- Population and Economic Growth: 30 years from now the world is projected to demand 50 – 60 percent more energy, which will require further investment in the sector.
- Markets Matter: Markets, particularly in developing countries will play a central role in evolution of the sector. Not too long ago, the market was primarily concentrated on the industrialized countries of Europe, Japan, and the US etc. However, over the last few years, 85 percent of growth in energy demand came from developing countries. These trends have changed the character and actors in the international oil industry.
- Environment and Climate Change Agenda: While the urgency of energy efficiency and conservation has been embraced more than ever before, the dialogue has not moved passed the need for greater efficiency. There are still many decisions to be made on how these issues will be dealt with, particularly given the shifting frontier between the market and government.
- Innovation: The US government is spending more than in the past on financing cutting-edge research on energy innovations; however it is still unclear what results these investments will produce. In this

century, the most significant innovations in the energy market include the emergence of liquefied natural gas (LNG) as a global commodity and the potential accessibility of shale gas.

Yergin then presented his views on the evolution of the petroleum markets:

- The sudden rise in petroleum prices in 2008 was supported by a number of factors, including: 1) the change in the shape of demand (growth in emerging markets); 2) geopolitical issues – i.e. conflict in the broader Middle East; 3) increase in costs – the supply chain was not robust enough to accommodate the increase in demand; and 4) the role of financial markets – i.e. speculation coupled with the belief that the world would run out of oil. Going forward, price movements are likely to be affected by the potential significant increase in production from Iraq; the level and composition of demand (OECD countries vs. emerging markets), and innovations and adoption of efficient fuel technology in emerging markets.

**Federal Systems in Petroleum Producing Countries:** George Anderson's (Forum of Federations, President and CEO) intervention gave a brief description of the Forum of Federations' on-going research on issues related to the management of oil and gas resources in federal countries. The project envisages the realization of 12 country case studies, a draft version of which was presented as background material for the Conference. What these countries have in common is that they are all formally federal states, but there are otherwise ample variations among them, in particular with respect to economic reliance on petroleum, level of decentralization, and revenue sharing arrangements. In preparing the case studies, authors were asked to look at constitutional arrangements (ownership vs. control, and taxing and regulatory powers), petroleum revenue arrangements (the impact of subsidies, role of NOCs, revenue sharing, equity vs. derivation), macroeconomic arrangements (volatility, intergeneration equity, fiscal policy, Dutch disease), environmental and social issues, and transparency and accountability arrangements (the link between tax payers and government, transparency in the distribution of oil revenues and expenditures at local level), and provide an overview of the historical reasons that underpinned their definition, current policy issues, as well as possible future trends.

## **B. Day 1 –Session 1: Ownership and Control of the Resources**

Country case studies were presented on **Argentina** — Juan Antonio Zapata, Professor of Economics, National University of Cuyo, Mendoza; **Australia** — Michael Crommelin, Dean Zelman Cowen Professor of Law, Melbourne Law School; and **India** — Ligia Noronha, Director, Resources and Global Security Division, The Energy and Resources Institute, New Delhi. The chair and discussants included: Charles Di Leva, Chief Counsel, ESSD and International Law, World Bank; Sean Kane, Middle East Desk Officer, United Nations Department of Political Affairs; Harvey D. Van Veldhuizen, Lead Environmental Specialist, Quality Assurance and Compliance, World Bank; and J. Barton Seitz, Partner, Environmental Practice, Baker Botts L.L.P.

This session focused on issues related to the institutional and economic impact of ownership versus control of oil and gas resources, the role of the constitution in defining ownership and control, the relevance of spacial concentration of resource endowments, and the role of environmental regulation.

- Ownership and control/management of natural resource endowments, while not always treated as such, are two separate issues. In general terms, control over natural resources is more relevant to sector

development than ownership rights. Indeed, ownership rights tend to be more symbolic, i.e. a collective declaration on issues of respective autonomy of communities, regions or countries.

- While some sub-national governments may have ownership rights over petroleum resources, national governments often exert control through the fiscal regime design, taxing authority, the setting of environmental management standards and contractual arrangements, and the imposition of price controls. Each of these areas of control impacts the development of the sector by affecting investment decisions. For instance, while the Argentine Constitution give provincial governments ownership rights over petroleum resources, price controls imposed by the federal government through export taxes – which essentially place a ceiling on the income that a petroleum exporter can collect - limit the ability of producing provinces to attract investors, and reduce the amount of revenue that the provinces can collect through royalties (since royalties are calculated on the value of production net of export taxes).
- In coastal states, ownership and control arrangements for petroleum resources onshore usually differ from those offshore. Onshore ownership and control arrangements may vary widely across countries depending on their constitution or laws. Offshore petroleum arrangements tend to be more standard because the offshore (perhaps excluding part of the territorial sea) is deemed to lie beyond the boundaries of the constituent units, so that the offshore is constitutionally federal jurisdiction. Indeed many countries are signatories to the United Nations Convention on the Law of the Sea (UNCLOS), which defines the rights and responsibilities of nations in their use of the world's oceans.<sup>1</sup> According to UNCLOS, up to 12 nautical miles from the baseline (territorial sea), the coastal state is free to set laws, regulate use, and use any resource.<sup>1</sup> From the edge of the territorial sea and up to 200 nautical miles from the baseline (or up to its continental shelf whichever is greater), the coastal nation has sole exploitation rights over all natural resources.
- For federations such as Canada and Brazil, where the adjacent provinces or states have been given an interest or rights in the offshore, the way the boundaries between national and local authorities, or among local authorities, are defined may give rise to controversy. In Brazil for example, where the boundaries of offshore zones between contiguous coastal states are defined with reference to orthogonal and parallel projections of the continental platform, changes in the coastline (e.g. due to erosion) cause changes in ownership and control rights, and in revenue entitlements. More importantly, there is no economic justification for the sharing of royalties among municipalities on the basis of a geometric criterion such as coastal proximity, which shows no direct correlation with the economic impact of oil-related activities at the local level. Once again UNCLOS offers guidance on how to manage disputes, including by allowing oil and gas activities to take place through the establishment of joint development zones while the parties pursue their efforts towards settling the dispute.
- The delineation of ownership and control rights between the differing levels of government is in part driven by a country's dependence on the petroleum sector (i.e. "oil economies" versus "economies with oil") and the extent to which petroleum is treated as a strategic sector. In Australia, for instance, where states have one of the highest levels of autonomy over the management and ownership of petroleum resources, the sector contributes to only 2 percent of GDP (and most of that is in the federal offshore). By contrast, in India the strategic role oil has played in energy security has tended to dictate the country's policies on ownership and control of resources, in addition to its choice of fiscal instruments, nature of contractual arrangements

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<sup>1</sup> In addition, a state can exert limited control for the purpose of preventing or punishing "infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea" in a band of water extending from the outer edge of the territorial sea to up to 24 nautical from the baseline. This is called the contiguous zone.

and pricing policy. In this context, all offshore petroleum resources are owned and controlled by the federation and onshore resources are owned by the state but controlled by the center.

- With respect to environmental regulation, it was noted that often the national government is best placed to act as regulator – setting a minimum floor on environmental management standards -while sub-national governments can more effectively implement and tailor regulations to the condition most relevant to their particular conditions. From the perspective of the operator, environmental management is often best dealt with at the point of extraction (i.e. the local level) as local governments may have a greater interest in mitigating the negative local externalities associated with petroleum development; however, the technical capacity of sub-national governments is often limited. The mechanisms for setting and implementing environmental standards must, therefore, be flexible enough to accommodate local conditions and concerns and differing capacity at various levels of government. One possible approach to defining the role of each level of government with respect to environmental regulation and management of the environmental impacts of oil exploitation is to take into consideration a set of parameters, such as: geographic (onshore or offshore), timing and stage of development (exploration, development, production), technical capacity (which level of government is best equipped to make good technical decisions), and the nature of the social contract (i.e. the relationship between the communities and those institutions charged with governing their interests). In some case, an independent oversight body may be established to limit opportunities for corruption and rent-seeking.

### C. Day 1 – Session 2: Macroeconomic Management Issues

Three country case studies were presented on **Mexico** — Victor Carreon-Rodriguez, Chair, Department of Economics, Centro de Investigacion y Docencia Economicas; **Russia** — Galina Kurlyandskaya, Director General, Centre for Fiscal Policy, Moscow; and **Venezuela** — Osmel Manzano, Professor of Economics, IADB. Other participants in this session included: Silvana Tordo, Lead Energy Economist, Oil, Gas, and Mining Policy Division, World Bank; Jan Walliser, Sector Manager, Poverty Reduction and Economic Management Network, Africa Region, World Bank; and Rolando Ossowski, former staff member, International Monetary Fund.

Discussants on the session on Macroeconomic Management focused their interventions on issues related to stability and long-term sustainability, the effects of “Dutch disease” on both the national and regional economies, and public finance management tools at national and sub-national levels, including the use of savings and stabilization funds.

- Policy makers in both unitary and federal or decentralized petroleum producing countries, face similar macroeconomic management challenges. These macro-economic management issues revolve largely around: (a) how much of the current petroleum revenue should be spent, and how much should be saved for future use; (b) what to spend it on (composition of expenditure); (c) how to address vertical and horizontal imbalances; and (d) the accountability and public support for these fiscal policy decisions.
- The strategies and policy tools by which governments establish and implement their fiscal policy decisions depend on a number of factors, including ownership and access to the resource, the size of petroleum revenue compared to the rest of a country’s economy, its expenditure needs, institutional capacity, the structure of its economy, and its social and political situation. But ultimately, the key fiscal policy objective in

petroleum producing countries is to ensure the long term fiscal sustainability of public expenditure and macroeconomic stability.

- Policy tools and instruments can be designed to address many of these challenges and to enhance sound macroeconomic management in petroleum producing federal countries. However, discussants repeatedly echoed the centrality of *political-will* as essential to long-term fiscal sustainability and macro-economic stability.
- The country examples discussed in this session show a number of striking similarities: each have strong centralized fiscal and revenue management systems with local government having little power to raise revenue (despite their federalist structure); each is highly dependent on the petroleum sector (i.e. they are “oil economies”); and each has established some sort of *fund* for saving or stabilization. However, their fiscal policy choices have produced effects that are very different in terms of sustainability, stability, and regional development.
- From a macroeconomic perspective, some degree of centralized revenue management may help petroleum producers cope with volatility and ensure a level of regional equity. Central governments tend to be better able to manage volatility than sub-national governments, given their wide revenue base and their ability to diversify away from petroleum revenues. Moreover, during oil booms expenditures tend to rise, however sub-national governments are less able to cope with bust cycles by decreasing expenditure levels. Nonetheless, there are legitimate political-economy concerns that may arise from a centralized approach including the ability/willingness of the central government to respond to local needs and disputes on the constitutional authority of the center.
- There needs to be a balanced approach to the distribution of power between national and sub-national governments. The case of Venezuela provides a good example of how too much centralization can lead to poor macroeconomic outcomes, while Nigeria provides a counter-example where revenue management is highly decentralized and still macroeconomic outcomes are poor. Exactly how a country strikes the balance will likely evolve based on the particular political, economic, institutional, etc circumstances at the time. The appropriate institutional mechanisms should be designed to ensure that this balance is not undermined through political interferences.
- Especially in oil producing countries, the long-term, inter-generational equity, and precautionary saving objectives of the country are central to the debate on macroeconomic management. To help achieve these objectives, many countries have established some form of petroleum fund. The type of fund (whether it be savings, intergenerational, stabilization, etc) used to meet these objectives maybe less relevant than how much a country actually saves. While all three countries discussed during this session established a stabilization/savings fund, they all experienced limited success in meeting their *long-term* savings objectives. For instance, Russia’s Reserve Fund will likely be fully depleted by the end of 2010 as the country attempts to cope with global financial crises and the fall in oil prices. In Venezuela, the Macroeconomic Stabilization Fund (FIEM) actually introduced more volatility and pro-cyclicality into the economy.

#### **D. Day 1 – Closing Session**

**Fiscal Decentralization and the Resource Paradox** - Anand Rajaram Sector Manager, Public Sector Reform and Capacity, Africa Region, World Bank - discussed public sector management and governance issues in producing

countries, and lessons learned from World Bank technical assistance projects. The major challenge for petroleum rich countries is translating their resource endowments into development gains. Weak institutions, poor governance at various levels, powerful groups with vested interests (the political-economy), and poor capacity to negotiate a “good deal” on petroleum exploitation were cited as major impediments to achieving sustainable development outcomes in these countries. Moreover, public expenditure and investment management tends to be the weakest link. Public investment decisions are often ill-conceived, leading poor development outcomes and little wealth creation.

While there is no standard formula, some broad approaches to addressing these issues include: understanding the political-economy context; designing and implementing benefits-sharing and resource management arrangements that are tailored to address key challenges; fostering technical dialogue to help frame resource management from an objective perspective; and engaging civil society.

**Keynote Address: Oil and Gas in Conflict Afflicted Countries** by Nicholas Haysom, Director of Political Affairs, Office of the Secretary General, United Nations<sup>2</sup> – shared lessons learned from the negotiations of peace accords in conflict affected oil producing countries.

- In conflict and post conflict situations, two outcomes can occur: peace or intensified conflict. Natural resources, and in particular the sharing of benefits derived from their exploitation, can either lead to collaborative dialogue among opposing factions, or further exacerbate the conflict.
- Lessons learned from mediation and negotiations efforts suggest that some approaches are more likely than others to lead to a favorable outcome. These include the following:
  - To postpone addressing the most contentious issues until some level of trust is established between the negotiating parties. This may include the issue of natural resource ownership, which tends to be an emotionally driven. Indeed, ownership rights are among the most controversial aspects in the negotiation of constitutional arrangements. The debate should initially focus on more neutral areas related to sector development. However, it is important to note that the relevance of ownership rights is often overemphasized. In practice, management and control of natural resources, and access to or sharing of revenue derived from their exploitation have wider implications than ownership itself.
  - To “technicize” the debate. This helps to provide an objective view of the issues at hand and steers the negotiations away from political rhetoric. This can be done by engaging technical experts on issues such as sector management, contracts, and fiscal regimes early on in the negotiation process, and making them available to all stakeholders. Neutral technical briefings can also be used to help establish objective criteria.
  - To equalize the knowledge base. This helps to broaden the debate and the perspective of disputing parties. Mediators can play an important role in empowering all parties by providing them with sufficient knowledge so as to improve trust and facilitate negotiations.
  - To include a broad range of stakeholders in the negotiations process, including the spoilers.

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<sup>2</sup> This address is based on an article published by Nicholas Haysom and Sean Kane, “Negotiating Natural Resources for Peace: Ownership, Control, and Wealth-Sharing”, Center for Humanitarian Dialogue, October 2009.

- To ensure that mechanisms for solving disputes (i.e. courts) are seen as neutral by both parties. Often courts are empowered to resolve disputes or to interpret constitutional provisions on petroleum development issues. However, provinces may not accept the authority of national level judicial bodies to adjudicate their rights over natural resources.
- To propose policy options for the management and control of petroleum resources that address the interests of all relevant sides. This may include sharing control or dividing different roles associated with control between the center and the regions. For instance, generally standard-setting and regulatory functions are best placed at the national level, while implementation can be left to local government.
- To separate discussions over the management of petroleum revenues (who is best placed to collect and distribute revenue? who is entitled to what revenue?) from those related to the control and management of the sector. Raising and sharing petroleum revenue may have different objectives and concerns than the allocation of control over regulation and development of the sector. Treating these functions as one, as it is often the case, may make it more difficult to identify and address the issues that are at the core of contention.
- To facilitate reaching an agreement on disputes over revenue collection and distribution - which often arise as result of lack of trust in the ability or willingness of the national government to collect and/or transfer petroleum revenue to sub-national governments in a timely, transparent, and accountable manner - a number of options could be considered. One possible approach is to appoint a neutral private or international external entity to collect the revenue and transfer the relevant shares directly to sub-national governments. An alternative approach is to share revenue collection functions through the establishment of different taxation authorities, i.e. levying of different taxes at different levels of government. While this option adds some challenges to fiscal coordination, it eliminates the need for transferring revenues between different orders of government.

E. **Day 2 – Session 3: Raising and Sharing Revenue**

Country case studies were presented on **Canada** — André Plourde, Professor and Chair, Department of Economics, University of Alberta, Edmonton; and **Brazil** — Sergio Wulff Gobetti, Economist, Institute for Applied Economic Research. The Chair and discussants included: Philip Daniel, Fiscal Affairs Department, International Monetary Fund; Anwar Shah - Consultant Poverty Reduction and Economic Management Network, East Asia Region, World Bank; and Kai Kaiser - Senior Economist, Public Sector Governance, World Bank

This session covered issues related to the design and implementation of resource taxation in the federal context, the principle of equity versus discrimination in defining petroleum revenue distribution policies, and alternative criteria for revenue transfers.

- The design of the fiscal system is one of the main policy handles for petroleum sector development. While the fiscal regime determines how the sector will generate revenues, it also has an impact on the level of investment in the sector.
- While political stability and environmental considerations call for preferential access of producing regions to petroleum revenues, macroeconomic and equity considerations argue for the sharing of petroleum

revenues on a national basis. Balancing these two imperatives is often the main challenge to designing effective petroleum revenue-raising and sharing arrangements.

- The two country case studies presented in this session are examples of different approaches to revenue raising and distribution, which resulted in similar outcomes in terms of overall equity of the system.
- In the case of Brazil, resource rent taxes are levied by the center, and while there is a system of revenue sharing through transfers, this system has in fact exacerbated fiscal inequalities and de-incentivized some provinces from raising own tax revenues. The rules for revenue-sharing for off-shore resources are based on orthogonal and parallel projections of the continental platform. While revenues are shared on the basis of a variety of criteria, the application of the geographical principle of “bordering area” has exacerbated horizontal imbalances. The current challenge for the Brazilian system is setting the appropriate parameters for sharing revenue – i.e. beyond the geography of where oil production is concentrated. Indeed the fiscal imbalances generated by the current system are likely to be exacerbated by the coming on stream of the large sub-salt discoveries.
- Canada, by contrast applies a decentralized system of petroleum revenue-raising, with no direct sharing across orders of government. While there is a system of equalization, this is financed through the pool of general government revenues rather than from petroleum revenues, placing pressure on the federal treasury to equalize across all provinces even as revenue in producing regions increases as the result of oil price or production increases. This arrangement raises concerns over the long-term fiscal sustainability of the equalization system, as well as the extent to which the system is able to address horizontal imbalances. Moreover, the system does not equalize the rich provinces down, and there are signs that fiscal inequalities in Canada will grow significantly because of resource revenues.
- In general terms, a fully decentralized approach to revenue raising and/or sharing would likely exacerbate macro-fiscal imbalances, transferring price (and production) volatility to sub-national governments. Such a system would also tend to generate horizontal inequalities and fiscal inefficiencies (unless equalized through an effective transfer system), and to foster fiscally induced migration to regions where economic opportunities are limited. However, despite the economic rationale for a centralized system of revenue raising and sharing, in practice political prerogatives often play a preeminent role in fiscal policy choices.
- To help address issues of transparency and fiscal management, petroleum revenue management could be centralized, and associated with an equalization system to ensure the redistribution of revenues across levels of government. But even this system may pose challenges in countries where lack of capacity and trust hinder the relationship between central and local authorities.

F. **Day 2 – Session 4: Centralized versus Decentralized Petroleum Sector and Revenue Management**

Country case studies were presented on **Pakistan** — Gulfaraz Ahmed, ex-Chairman NCG and Secretary for Petroleum; and **USA** — Peter Mieszkowski, Professor of Economics and Finance, and Ronald Soligo, Professor of Economics, both of Baker Institute, Rice University, Houston, Texas. The Chair and discussants also included André Plourde, Chair, Department of Economics, University of Alberta; Ian Gary, Senior Policy Adviser, Oxfam America; and Miranda Ferrell, Senior Energy Researcher, Center for Energy Economics, University of Texas.

This session focused on the factors that determine the control of petroleum resource, and on issues related to local interest in centralized regimes vs. national interest in decentralized regimes.

- The case studies presented in this session are example of opposite approaches to petroleum sector and revenue management: a centralized system in Pakistan and a decentralized system in the United States. While in Pakistan the jurisdiction over petroleum exploration, production, pricing, regulation and the fiscal terms is vested in the federal government, in the United States, much of the control and management of on-shore petroleum resources are devolved to the states. Despite these differences, in both cases, oil revenues are not part of an equalization process and accrue to the oil-producing sub-national governments. In Pakistan revenues are collected by the national government and transferred to the sub-national governments a simple pass-through. Conversely, in the United States revenues are collected directly by producing states. The presenters advanced the hypothesis that this approach to revenue sharing - where no equalization is made – is fiscally and socially sustainable because the petroleum revenue, although important in the producing regions, is not a significant portion of the countries' GDP and total government revenues.
- Capacity constraints are often cited with respect to local governments' ability to manage the sector. In a decentralized system revenue management and public investment fall under the purview of sub-nationals, which can pose challenges when oil prices are high and significant windfalls are transferred to sub-national budgets. There is, therefore, a need to provide capacity-building when federal government responsibilities are devolved to local government. The United States presents somewhat of an anomaly in this respect, as state governments in producing regions tend to be better able to manage the hydrocarbon sector than the national government. However, as resources (i.e. shale gas) are discovered in states with little experience and capacity to manage new developments, challenges may arise, requiring the federal government to increase its involvement.

**Keynote Address: Managing the Politics of Oil Reforms: Lessons from Iraq** - Peter Cameron, Professor of International Energy Law and Policy and Director of Research at the CEPMLP, University of Dundee – Using lessons learned from Iraq, this session highlighted some of the political dimensions and challenges to defining the parameters of ownership and control of petroleum resources between disputing levels of government in a post-conflict situation.

In addition to Iraq's historical realities (including decades of authoritarian rule, internal violence between differing ethnic and religious groups, and cross-border conflicts), the current legal and regulatory framework governing the ownership and control over petroleum resources has led to a series of intergovernmental disputes between the Kurdish region and the central government. While the constitution does specifically address ownership and control, various articles present ambiguities in the assignment of ownership and control rights between the center and the regions. Some aspects of the process of drafting the Constitution are fraught with questions of legitimacy, thus challenging the nature of the federal structure in Iraq. Moreover, while the need for new sources of revenue has lead the federal government to attempt to develop an Oil and Gas Law, consistent with the constitution – a key requirement for the long-term stability of contracts rights – such efforts seem to have been suspended for the time being.

The Constitution's lack of legitimacy and clarity has created the space for the Kurdish region to develop an oil policy that seeks to maximize their political aspirations for autonomy, negotiating oil contracts with little or no coordination or approval from the central government. The presenter noted, "The KRG [Kurdish Regional Government] have had an agenda ... and they have developed an oil policy that fits a political agenda for the maximum degree of separation short of independence". The federal government, on the other hand, has also

pursued the development of larger, perhaps more profitable, fields in the rest of the country (in particular in the South). Mr. Cameron again noted, “Such an increase in production from the large fields in southern Iraq would generate significant revenues for the federal Government and would limit its need for revenue from the Kurdish development of relatively small fields in northern Iraq.” As revenues accruing to the Federal Government from the development of these fields grow, the bargaining position of both groups is likely to shift. How the dispute evolves will likely depend on the position taken by the next Iraqi government.

#### G. Day 2 – Session 5: Accountability and Transparency

Two country case studies were presented during this session: **Mexico** — Pedro Luna, General Director of Revenue Policy, Mexican Ministry of Finance; and **Nigeria** — Wumi Iledare, Professor of Petroleum Economics and Policy Research, Louisiana State University and Rotimi Suberu, Professor of Political Science at Ibadan University and at Bennington College. The Chair and discussants were: Petter Stigset, Senior Adviser, Energy Department, NORAD; Antoine Heuty, Deputy Director, Revenue Watch Institute; and Anton op de Beke, Senior Economist, Office of Technical Assistance Management, IMF.

The participants in this session focused their interventions on transparency and accountability, fiscal rules and responsibility, budget integrity national oil companies, and checks and balances.

- Issues of transparency and accountability in the oil and gas sector have gained prominence over the last decade. In federalist contexts, where the mechanisms for accountability (such as effective democratic institutions and fiscal regimes that tax beyond the petroleum sector) are often weak, these issues may become even more salient. The debate on setting the appropriate transparency and accountability mechanisms can usefully add to the political dialogue on resource rent sharing, while also ensuring that the potential development gains from fiscal decentralization and petroleum sector development materialize.
- While policy designs on revenue management often focus on macro-fiscal and revenue-sharing arrangements, there is a need to shift the debate towards effectiveness and quality of public spending. This is particularly relevant in the context of fiscal decentralization, as local governments often face capacity constraints and have weaker accountability mechanisms to monitor effectiveness and quality of spending. There are various ways of improving effectiveness and accountability of spending at sub-national level, such as the use of conditional grants, and the establishment of credible independent oversight institutions with the autonomy to investigate, to report and to punish corrupt and fraudulent practices.
- Civil society should also play an important role, as the experience with the Extractive Industries Transparency Initiative (EITI) has shown. While the EITI provides an entry-point to engage in the dialogue at the national level, some countries (e.g. Ghana) offer examples of adapting and tailoring EITI to the sub-national level.
- Poor accountability and public expenditure monitoring at sub-national level continue to hamper development in Nigeria. The application of the derivation principle has created significant disparities in per capita federal revenue transfers in the favor of oil producing regions. But, despite receiving higher levels of resource revenues, these regions continue to face poor human development outcomes, a lack of sustainable investment in public infrastructure, and regional conflict. The establishment and implementation of complementary fiscal responsibility and efficiency mechanisms – such as an economic and financial crimes commission, and public procurement and extractive industries transparency legislation – can serve to limit

corruption in the sector. The speaker noted that there is need for greater accountability and transparency at the local level, through the use of, for instance, conditional grants to local government that mandate the use of revenues to meet specific developmental objectives. The draft Petroleum Industry Bill, currently awaiting Parliamentary approval, is expected to help address some of these issues.

- In 2008, Mexico passed legislation aimed at increasing transparency and accountability in the petroleum sector by improving the decision-making process and execution capacity of its national oil company, PEMEX. Reforms included: 1) the appointment of new professional members to the Boards of Directors of PEMEX and each one of its four subsidiary entities; 2) the creation of seven executive committees to support the Board of Directors; 3) the possibility of issuing Citizen Bonds linked to PEMEX's performance; and 4) the establishment of a flexible fiscal regime that takes into account the different level of complexity of oil and gas field developments. The Internet has also played a role in ensuring transparency of information, as PEMEX is now required to post all of its financial and operational activities on its website. However, more transparency and accountability is needed with respect to the use of resources by the states.

### III. NEXT STEPS/CONCLUSIONS

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#### A. Conclusions

The main messages derived from the conference are summarized below.

- Petroleum-producing federal and unitary countries face similar macroeconomic challenges, which generally revolve around the following issues: 1) how much of current petroleum revenue should be spent, and how much should be saved for future use; 2) what should revenues be spent on (i.e. the composition of expenditures); 3) whether and how to address vertical and horizontal imbalances; and 4) accountability and public support for fiscal policy decisions. In a federal system, however, there is the added dilemma of balancing constitutionally granted rights to sub-national autonomy (i.e. to ownership and/or control of petroleum resources) with the need to manage macroeconomic and revenue volatility, and to ensure some level of national policy coordination and regional equity.
- The strategies and mechanisms with which governments establish and implement their fiscal policy decisions depend on a number of factors, including: the size of petroleum revenue vis-à-vis the rest of the economy, expenditure needs, institutional capacity, the structure of the economy, and social and political dynamics.
- When it comes to the management of the petroleum sector, and of petroleum revenues in particular, experience would seem to indicate that the national government is often better equipped than state or local governments to carry out these tasks. There are many arguments in support of this approach. These include revenue stability and treasury management, national treasure, capacity differentials between national and state/local governments, uneven distribution of the resources, coherence in natural-resource policy, and to some extent transparency. But there are also valid arguments in support of decentralization management and collection of petroleum revenue: greater accountability to local citizens; the need to compensate the producing area for social and environmental impact of exploration and production activities; and the need to respond to the producing regions' heritage/political demands. Each country must find its balance between these factors, based on the strategic importance of the resource, the constitutional arrangements and the political culture.
- Often the country's constitution mandates or provides guidelines with respect to ownership rights on natural resources, revenue assignments (who should levy taxes on what), expenditure assignments (who should be responsible for what), legislative authorities (who should regulate what), borrowing authorities (whether or to what extent state or local authorities should be allowed to borrow), etc. But national and sub-national governments still have to address the policy and management issues raised by the exploitation of natural resources (i.e., efficiency of resource allocation, equitable distribution of benefits, macro-fiscal management issues, etc). Political constraints (such as the strength of different regions and groups in political decisions), and capacity constraints (such as the level of administrative capacity at different levels of governments) affect these policy and management choices.
- The design of intergovernmental financial arrangements should aim to address imbalances that arise between expenditure and revenue assignments (vertical imbalances), and the extent to which difference in

needs and capacity between central and local governments should be mitigated or equalized (horizontal imbalances). In practice, these imbalances are mitigated by setting up a system and principles to share (partake in the same revenue source), transfer (transfer a part of revenue to a different level of government), and/or assign revenues (assign the responsibility to raise a certain type of revenue to a specific level of government) across levels of government.

- Revenue distribution systems vary widely among countries. For example, the revenue to be shared may be a specific revenue stream (such as royalties, or bonuses, etc) or all petroleum revenue; the proportion of revenue to be shared or transferred may take into consideration the expenditure needs of the states vis-à-vis their capacity to generate revenue, or simply be based on the size of the population or a set percentage, a negotiated amount, or other criteria, or no criteria at all (discretionary); revenue may be assigned or transferred to states/local governments on the basis of where the revenues were raised (derivation principle), etc. Each of these methodologies has different public finance management and fiscal management implications that need to be carefully considered in the design of intergovernmental arrangements.

Further policy and empirical work is necessary in order to identify guidelines for the management of petroleum resources in federal and decentralized contexts. The following are some of the questions that we aim to address in subsequent work in this area.

- Do the case studies shed sufficient light on the key drivers of design of inter-governmental fiscal arrangements in federal contexts?
- Are there compelling economic and financial reasons that justify a special treatment of petroleum revenue, different from other sources of revenue?
- Should equitable distribution of petroleum revenues across a federation be pursued? If yes, which criteria for revenue transfer, sharing, or assignment are more likely to be socially and economically sustainable?
- Does the federal structure of a country affect the pace and efficiency of sector development?

## **B. Next Steps**

The conference on *Oil and Gas in Federal Systems* is part of a broader initiative that aims at providing policy makers' in petroleum producing countries with options for the management of petroleum resources in federal and decentralized contexts. To help achieve this objective, we will continue to further the debate and policy work on the themes discussed at the conference.

Furthermore, the feed-back provided by participants in the conference will help to refine the case studies, which in turn will provide the basis for developing policy guidelines for the management of oil and gas resources in federal context. The results will be presented in a book on oil and gas in federal systems, expected to be published by the end of 2010. The Forum of Federations will lead the preparation of the book, with contribution from World Bank staff. It will also conduct a number of technical workshops in petroleum producing countries.

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<sup>i</sup> The most significant issues covered were setting limits, navigation, archipelagic status and transit regimes, exclusive economic zones, continental shelf jurisdiction, deep seabed mining, the exploitation regime, protection of the marine environment, scientific research, and settlement of disputes.