# Comments from Joseph Stiglitz, Columbia University

## Research Agenda on the Resource Curse

The following research agenda is based on issues raised during recent visits to Azerbajan, Venezuela, Chile, and Nigeria concerning critical issues that they face in their policy dialogues, both internally, and with international financial institutions.

- 1. Macroeconomics of resource management and sustainability
  - (i) Debates in Azerbaijan centered around issues of the rate of expenditures and what moneys should be spent on. One view, for instance, argued that the foreign exchange generated should only be spent on the foreign exchange component of investment projects; spending money on domestic resources, e.g. labor, was likely to lead to a Dutch disease problem, and in any case, so long as there were underutilized resources, foreign exchange was not required; domestic credit creation could be used for domestic resource mobilization. The pace of expenditure should be determined by the availability of high return projects, not by the availability of funds or some steady stream of expenditures. The other view argued that there should be a steady rate of expenditures, that if there were an insufficiency of good projects, the government should use the funds to reduce taxes. A through macroeconomic analysis of the appropriate rate and pattern of expenditure would help inform this debate.
  - (ii) Accounting frameworks have been a major problem confronting several countries. In Chile, for instance, after a stabilization fund was created, when the government sought to use money from the stabilization fund for countercyclical demand management, the expenditures were allegedly treated by the IMF as simply another form of deficit spending. Chile worried that this both undermined the rationale for creating the fund and would hurt Chile in international markets. They also argued that the accounting frameworks that were forcing privatization, regardless of the relative efficiency or social returns to private versus public ownership, GDP accounting frameworks that do not take account of the depletion of natural resources, or the privatization of government enterprises, may give a misleading indicator of the success of the economy and its sustainability. Accounting frameworks are important in shaping decisions; distorted accounting will lead to distortions in policy decisions. A through analysis of these and other accounting issues is, I think, one of the key issues.

### 2. Distributive Consequences

In countries, like Venezuela, the benefits of the oil money go to a minority of the population. Two thirds of the population remains in poverty. It is this, perhaps more than anything, which has contributed to the political instability of that country. We now have budgetary accounting frameworks that can be used to analyze the incidence of government oil expenditure. The development and application of these tools to resource rich counties would contribute to the policy dialogue, and would help ensure the equitable distribution of revenue.

#### 3 Federalism

In many countries, oil or mineral deposits are located in a limited area within the country, which has to bear the brunt of the environmental and social costs of extraction; but naturally the country believes that the revenues should be shared more generally. In Nigeria, decisions about how revenues are to be shared and who should should make decisions on the usage of the revenues are inextricably linked with political decisions concerning decentralization and federalism. At the very least, an analysis of the experiences of the different countries would be helpful in guiding countries working their way through these political issues.

## 4. Contracting Leasing arrangements

In many countries, there is a concern about a "fair" division of revenues between the country and its citizens and the foreign producers. Even in the United States, with seemingly good "governance," there has been concern about excessively rapid leasing having the effect of a "giveaway" during the Regan era, and in two important cases, oil companies have been convicted of, or agreed to out of court settlements effectively admitting, gross abuses in reporting of revenues for royalty purposes. This has led to rethinking the design of auctions systems – looking for systems that are more "corruption" resistant. Recent research and experience in auction theory has shown that different auction designs can have markedly different effects on the revenues raised by government. There are two proposed interrelated research/policy papers. Part of this research project would look at the fraction of the "net back" price received for oil in different countries, and attempt to relate the price to the terms and design of the contract and the auction process.

- (i) Lessons on "cheating": The first would entail asking lawyers and economists involved in various litigation/contract disputes (Alaska, Alabama, the Caucasus) to provide a list, taxonomy, and an analysis of the various kinds of cheating and what can be done to minimize this cheating.<sup>1</sup>
- (ii) Auction design. It is now recognized that is make a great deal of difference for the revenue raised by the government whether there is a royalty auction or a bonus bid auction. Because of information externalities, the pattern of leasing (Alberta's checkerboard leasing) too many have major effect on revenues raised. (See Stiglitz's earlier work on information externalities in oil leasing.) The design of the spectrum auctions had a major effect in enhancing government revenues (see Milgrom). In some places (including the U.S.) there has been concern that lease provisions lead to premature shutdown of wells, or in other cases, to excessively rapid extraction. The lessons on "cheating" too have impacted thinking on auction design. The task of this paper would be to develop "corruption resistant revenue maximizing auction systems." And would include an analysis also of the pace and sequencing of leasing and the design of a variety of provisions to ensure efficiency and sustainability.

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<sup>&</sup>lt;sup>1</sup> Jeff Leitzinger of Econ One and I worked together on the Alaska case.