

The Natural Resources Trap

Private Investment without Public Commitment

edited by William Hogan and Federico Sturzenegger

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Preface

Recent years have seen unprecedented volatility in commodity prices. Oil, to mention a paradigmatic case, increased steadily from below \$18 a barrel in 1998, to reach an all-time high of \$147 by mid-2008. Six months later, however, the price had collapsed back to \$40. Such roller-coaster movements have been common for most other commodities: iron, timber, aluminum, soybeans, and corn, all of which have seen their prices skyrocket and then collapse.

Thus the world experienced another trying time for governments and private investors in commodity export projects. During the commodity price upswing, many governments in countries with energy and minerals felt compelled to appropriate a larger share of apparently ever-increasing natural resource revenues. From the United Kingdom and Russia to Bolivia and Venezuela, countries changed the contract rules by which private-sector participation engaged in natural resource production. At the height of the boom, debate reopened even in the United States about the need to socialize a larger share of the oil revenues in the Gulf of Mexico and Alaska. At lower commodity prices, these new contracts appear far less attractive, and the larger state participation, justifiable when prices were high, becomes a burden. It will not be long before private-sector participation is called back in.

The cycle through 2008 stands out for the magnitude and speed of the changes in prices, but the pattern is not new at all, nor is the contractual instability that comes with it. It is precisely the recurrent nature of the cycle of governments opening up to foreign investors, then appropriating the resources, only to start the cycle again sometime later, that we find most intriguing. If it is well known that commodity prices exhibit cycles, why are contracts being renegotiated again and again? Why do these contracts not allow for better mechanisms that

could smooth the fluctuations in a way that would provide a more stable commercial framework?

To explore this question, and aware that research on contracts in natural resources had received little attention in recent years, we invited a group of leading scholars to address the issues from different angles. The response was overwhelmingly positive. As a result, the investigations span a number of fields, ranging from Aghion and Quesada's application of contract theory in chapter 2, or Engel and Fischer's analysis of optimal extraction paths and taxation in the presence of expropriation risk in chapter 5, to Rigobon's public finance analysis explaining the relative benefits of royalties in chapter 7. The impact of social beliefs on contract stability is taken up by Di Tella, Dubra, and MacCulloch in chapter 4, and the pricing of expropriation risk is discussed by Schwartz and Trolle in chapter 8, while Tomz and Wright provide a historical analysis of the expropriation cycles in chapter 3.

We expected that the contributions to *The Natural Resources Trap: Private Investment without Public Commitment* would reveal an inherent complexity. It was unlikely that a single model, concept, or idea, such as time inconsistency, could capture by itself the full nature of the problems. If a single model applied, contractual frameworks would be much simpler and sustainable. In fact, the chapters explain some sources of this complexity: how the volatility of the revenue flows justifies particular contractual frameworks, how beliefs about and public perception of the fairness of the contracts are shaped by price instability, how the ability to hedge in financial markets affects government incentives, how lack of credibility reinforces a time-inconsistency problem, and so on, all making it difficult to bring in private participation on reasonable terms.

Anticipating this complexity, we complemented the analytical pieces with a few relevant case studies. Hence, the book includes contributions on the experiences of the United Kingdom, Bolivia, Argentina, Venezuela, and, in Mossavar-Rahmani's final discussion in the epilogue, a broader synthesis of similar dilemmas in other parts of the world. In these country chapters, the authors explore how capital structures of private firms evolved in unexpected directions in the United Kingdom, how social aspirations conspired against reforms in Bolivia, how internal political dynamics played a role in Argentina, and how irrationality may be necessary to explain some of the decisions in Venezuela. Thus the real-world cases added another layer of richness to the analysis.

The papers were presented at a conference at Harvard, November 1–2, 2007. The interaction was both interesting and productive. In one instance, the comments of respondents (Wernerfelt and Zeckhauser, commenting on the paper by Engel and Fischer in chapter 5) grew into a separate and complementary chapter. In every case, the discussion set the stage for revision of the papers into the form contained in this volume.

While we did not uncover a universal “contract” that could solve all the problems, the book provides a review of the main elements. Our introductory chapter locates the subsequent chapters within the context of the literature on natural resource contracting. The results should be a valuable reference for scholars working on the issues and for policymakers trying to grasp the main lessons learned from other countries’ experiences.

Lawrence Summers’s comments motivated the title of the book. He talks about the privatization trap: the idea that countries with low credibility need to offer attractive terms to the acquiring firm. But these attractive conditions make the contracts politically unviable later on. We draw a parallel to Summers’s concept with the notion of the “natural resources trap.” Governments with poor credibility need to offer attractive terms to private-sector investors. The more serious the credibility problem of the government, the better the deal it needs to offer the private sector. Building credibility, in turn, would imply abiding by high private rates of return for some time. But these terms become a political liability once a society sees the high rates of return, at which time pressure mounts for renegotiation. This difficulty in building credibility constitutes part of the natural resources trap. Additionally, rewards and punishments are highly asymmetric. A contract that delivers to the government a reasonable outcome in bad times is taken for granted by society, but a contract that delivers a poor outcome in good times is taken as a gift to foreign or private-sector interests. However, if the government appropriates more on the upside it will be forced to absorb more of the losses in bad times. Large losses in bad times are politically costly, but so are large gains to private-sector firms in good times. It is difficult to avoid both, thus adding to the complexity of the natural resources trap. It is these factors, among many others, that have made contractual stability elusive so far. In the short run, the losers are the private investors hurt when their contracts get renegotiated. But investors adjust. In the long run the losers may well

be the citizens of the host country that suffers lower investment. Thus the trap and the tragedy.

In putting together this book we received the help of many people and institutions. The Harvard Kennedy School provided the environment in which to carry forward this project. The project was supported by the Mossavar-Rahmani Center for Business and Government and the Consortium for Energy Policy Research.

We thank Jo-Ann Mahoney, who was in charge of the logistics of our conference and supported the preparation of this volume, assisted by Trudi Bostian. Laurence Tai edited the comments. John Covell and Sandra Minkinen helped smooth the path at the MIT Press. Last but not least, we thank our families for their support and patience while we made this project a reality.