

Fiscal Affairs Department

FISCAL REGIMES FOR EXTRACTIVE INDUSTRIES— DESIGN AND ASSESSMENT



Philip Daniel

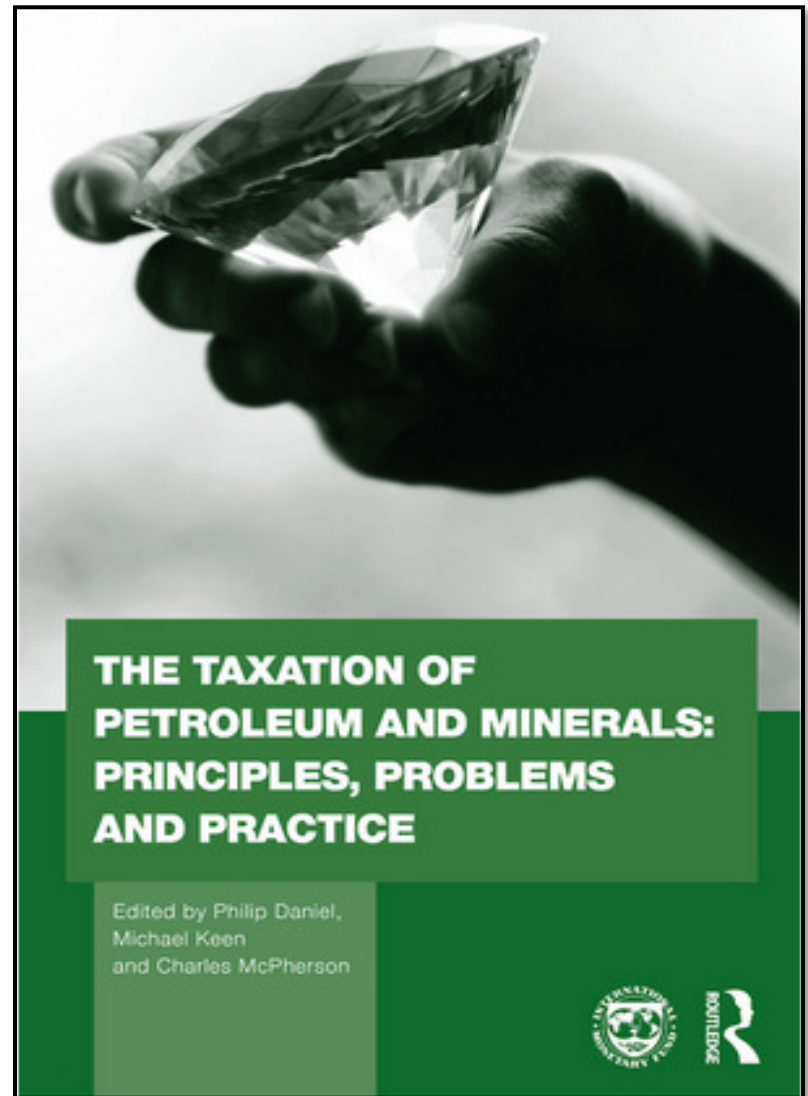
International Monetary Fund

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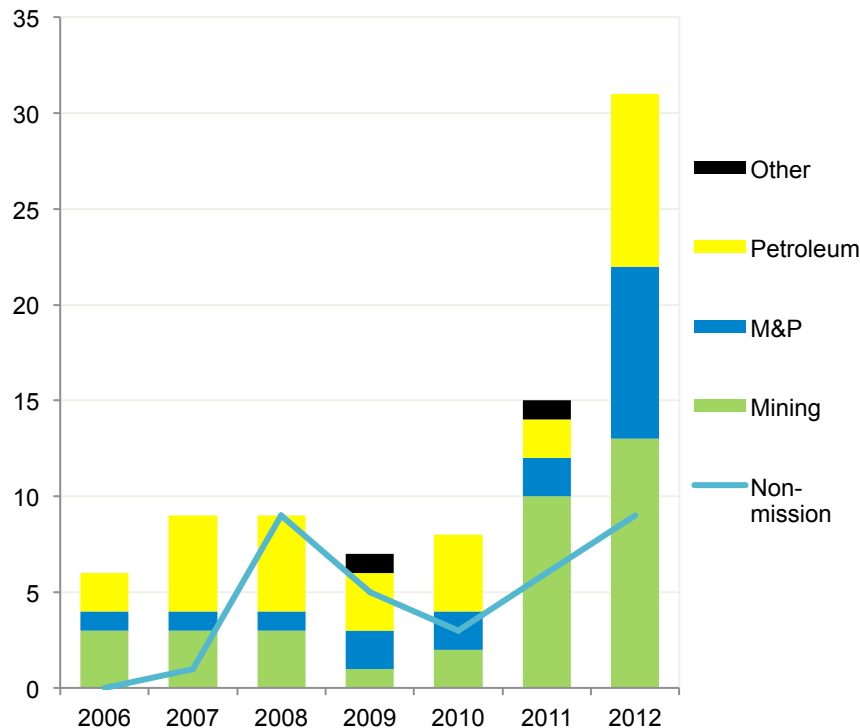
Drawing on book, and
recent Board paper at:

[http://www.imf.org/
external/np/pp/eng/
2012/081512.pdf](http://www.imf.org/external/np/pp/eng/2012/081512.pdf)



Expansion of IMF TA on EI Fiscal Regimes

TA Missions and Other Activities by Year, FY06–12

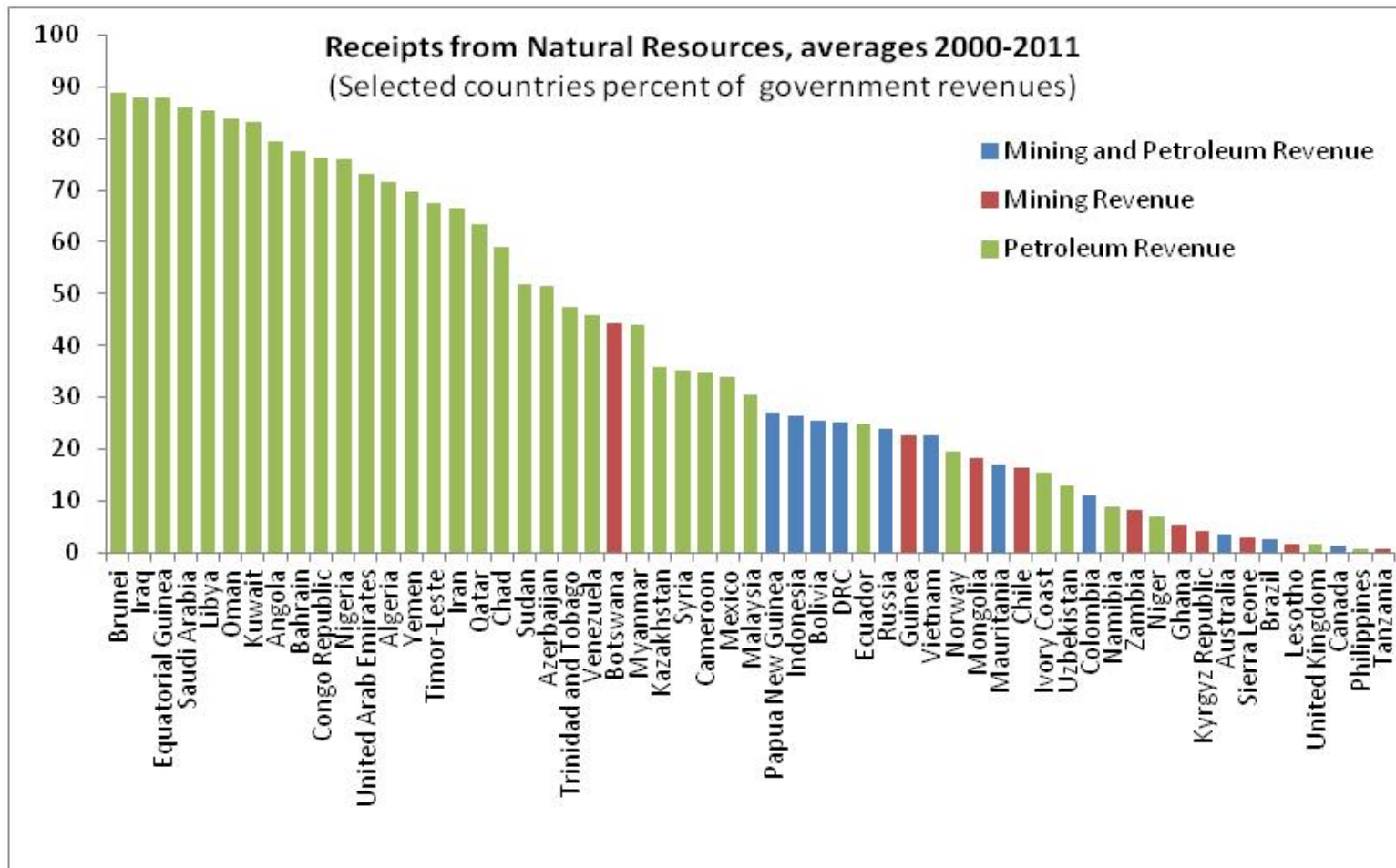


- Large increases in demand for TA on EI fiscal regimes
- Doubling of supply since start of MNRW TTF in FY12
- New bilateral program with NORAD
- Shift to medium-term projects
- No direct involvement in negotiations, but in policy context

Benchmarks

- Start from understanding of EI characteristics...
- ...and distinctive country features
- Objectives lead to criteria for assessment
- Convert criteria to measurable indicators
- How do instruments rate against criteria?
- Transparency and administration – qualitative assessments

A key revenue source for (increasingly) many...

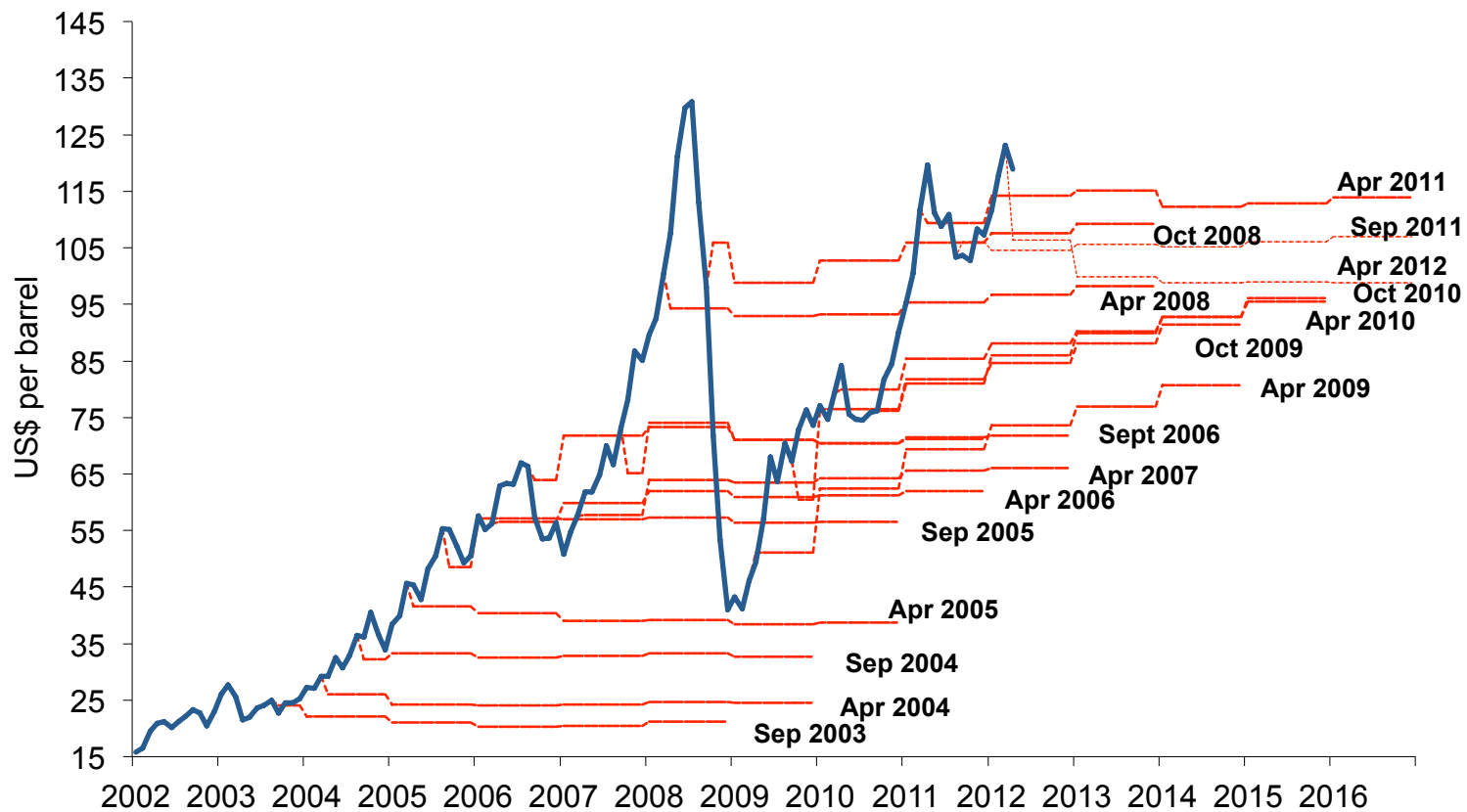


Why distinct fiscal regimes for EI?

- Substantial rents
- Pervasive uncertainty

Oil price forecasts and outturns

WEO Oil price Forecasts 2003–12
(Monthly prices, 2010 U.S. Dollar per Barrel)



Why distinct fiscal regimes for EI?

- Substantial rents
- Pervasive uncertainty
- Asymmetric information
- High sunk costs, long production periods
- Extensive involvement of multinationals in some countries...
and of State-Owned Enterprises in others

Why distinct fiscal regimes for EI? (2)

Few of these considerations are unique to resources— they're just bigger. What is unique is:

- Exhaustibility
 - Recognize revenues as transformation of finite assets in the ground into other assets

Central objectives

- Maximize PV of net government revenues
 - Neutrality and revenue-raising capacity
- Timing of receipts
- Riskiness of receipts
 - Many developing countries may be less able to bear risk than large MNEs...
- “Progressivity”
 - Meaning? Responsiveness to current prices?
 - But more progressive means more risk
- Easy administration (for authorities) and compliance (for taxpayers)

<i>Evaluation Criterion</i>	<i>Key Indicators</i>
<i>Neutrality</i>	AETR (government take in a profitable case) METR (wedge between pre and post-tax IRR, as % of pre-tax) Breakeven price
<i>Revenue Raising Capacity</i>	Time profile of revenue Share of rent to government
<i>Adaptability / Progressivity</i>	Tax share of total benefits
<i>Risk to Government</i>	Variance of NPV of revenues (coefficient of variation) Proportion of revenues in first n years
<i>Investor Perceptions of Risk</i>	Dispersion of expected IRR (Coefficient of variation of IRR) Probability of below-target returns Value of negative returns Cumulative probability distribution of outcomes
<i>Relating Revenue Yield to Investor Risk</i>	Compare expected yield index with expected risk index
<i>“Prospectivity Gap”</i>	Present value to equalize mean PV to investor Present value to equalize PV of negative returns

Three main fiscal schemes (sometimes blended)...

- Contractual, including production sharing or service contracts
- Tax and royalty, with licensing of areas
- State ownership or participation
 - These can be made fiscally equivalent
 - Staff advice works within all three
 - Design to achieve efficiency and transparency in each

Fiscal Instruments for EI (1)

- Explicit rent taxes
 - Non-distorting in principle, if take proper account exploration stage
 - Many forms, with different timing of receipts
- Royalties
 - Distort extraction—and exploration—decisions
 - Can be used in principle to control extraction path
 - Revenue from day 1

Fiscal Instruments for EI (2)

- Bonuses (with bidding)
 - Less common in mining—why?
- Corporate income tax
 - To ensure equity income not favorably treated
- State participation
 - Can help resolve asymmetric information
 - But potential governance issues

Evaluation is essential...

Two approaches:

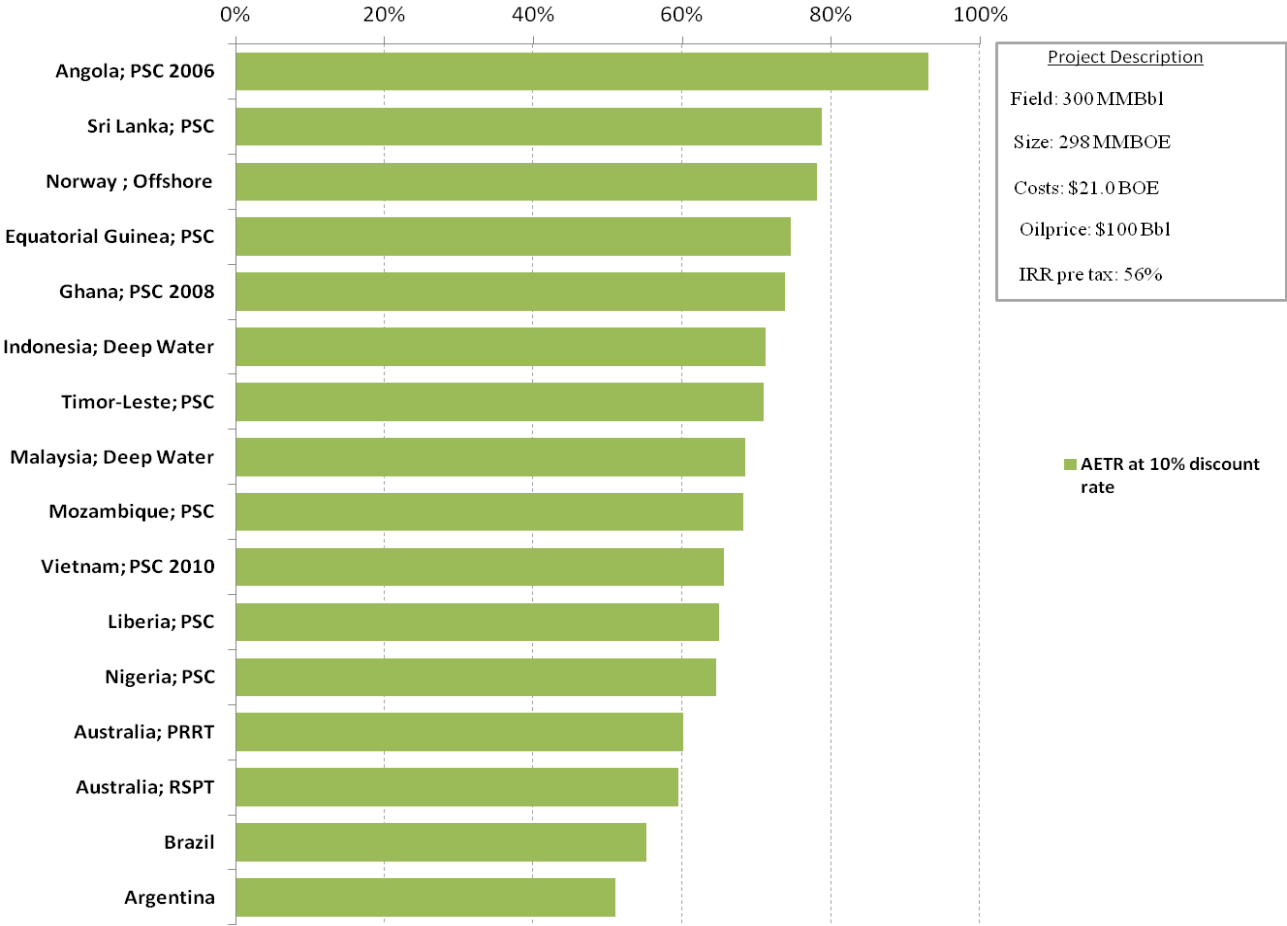
- Model effects on exploration, development, and extraction
- Scenario analysis – the FARI modeling system

Use indicators related to objectives and criteria, e.g.

- Average effective tax rate
- Progressivity in prices

FARI: Simulated Petroleum Field

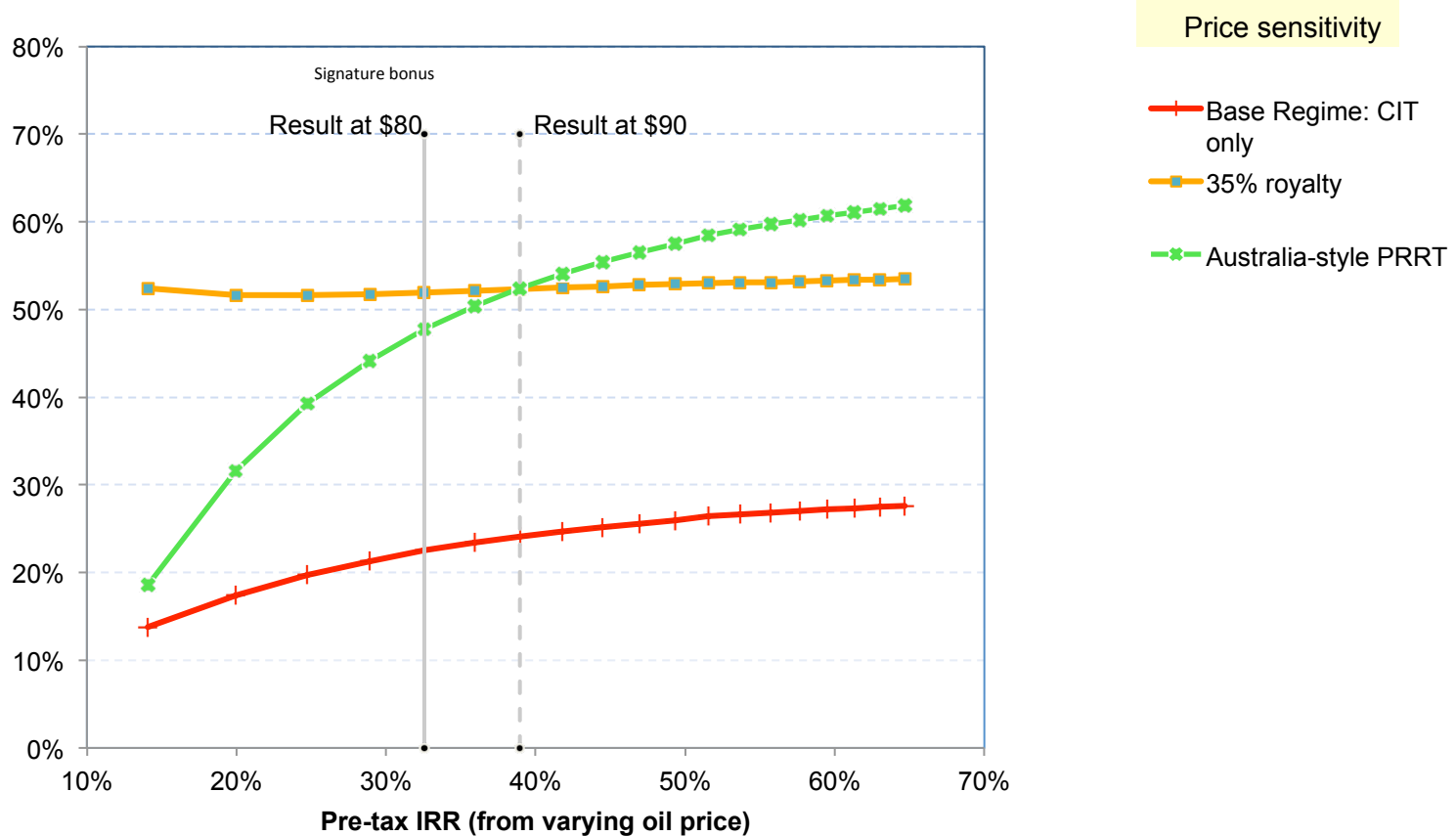
Average Effective Tax Rates for Selected Regimes



FARI: "Progressivity" – Tax share response to price changes

Govt. Share Total Benefits 10.0% Disc.

Project:Offshore290MMbbl Size: 287 MMBbl Cost:\$23.0 Bbl



Recommended approaches (1)

Fiscal regimes for EI vary greatly

- Simulations for mining suggest government shares of 40 to 60 percent—but collection data suggest lower in practice
- For petroleum, simulated shares are higher: 65 to 85 percent
- Achieved shares below these ranges are cause for concern, or regret

Recommended approaches (2)

Country circumstances require tailored advice, but generally within a framework that combines

- A royalty on gross revenue
- A tax targeted explicitly on rents (and thus on the achieved results of extraction)
- Together with normal corporate income tax
- Bonus-bidding may have a role in promising environments

Recommended approaches (3)

Such a regime ensures:

- Revenue from day one
- That government's revenue rises as rents increase

Transparent rules and contracts promote stability and credibility

- Inclusion of rent taxes reduces pressures to renegotiate or unilaterally change the rules
- But processes to allow review and revision may be needed

Administration

- EI tax administration should not in principle be hard
- Nonetheless, often both difficult and badly done
 - Complex regimes
 - Fragmented administration
- Claims that administration of profit/rent-based EI taxes is too hard, and that countries should rely on royalties, are misplaced
- Principles of effective modern tax administration are equally relevant to EI

Transparency

- Standards in IMF Guide on Resource Revenue Transparency, EITI, and Natural Resource Charter
- Transparency in fiscal regime design and implementation is vital but often lacking
- Transparency assessment now a key element in IMF fiscal regime advice for EI

Transparency standards

Legal Framework for Resource Revenues

The government's ownership of resources in the ground is clearly established in law and the power to grant rights to explore, produce, and sell these resources is well established in laws, regulations, and procedures that cover all stages of production of marketable mineral commodities.

Fiscal Regime

The government's policy framework and legal basis for taxation or production sharing agreements with resource companies are presented to the public clearly and comprehensively

Current and emerging issues

- Stability and credibility
 - General legislation or imposition by contract?
- Tax treatment of gains on sales of rights (direct or indirect)
- Tax treaties may cause base erosion
- Vulnerability to abusive transfer pricing
- Regional coordination
- Processes for granting rights—design of auctions

New work planned

- Two working papers on decision model and literature survey prepared for Board paper
- Technical note and manual on the FARI system
- Manual on revenue administration for EI
- Book on international issues in fiscal regimes for EI
- Better understanding of revenue potential
- Greater clarity on concept and operationalization of 'progressivity'