Fiscal Regimes for Extractive Industries in Resource Rich Countries

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Characteristically, EIs (mining and Petroleum Upstream) have peculiar features that require special fiscal regimes. These features include:

- high up-front capital investments,
- long production horizons,
- widespread uncertainty,
- asymmetric information,
- large involvement of multinationals and state-owned enterprises, and
- the potential to generate substantial economic rents.
Why Fiscal Regimes for EIs?

Special characteristics of the extractive sector:

i. Mineral and petroleum resources are exhaustible.
   - the resources in the ground are in fixed supply and will determine the maximum life of a project.

¥ The main source of potential rents.
Why Fiscal Regimes for EIs?

ii. Potential for economic rent, being in a fixed supply.
   a. profits in excess of the minimum return required for an investment to go ahead;
   b. the revenue generated over the life of a project in excess of the total exploration, development, and production costs, including a normal return to the investor;
   c. differences in qualities of mineral or petroleum deposits and volatile commodity prices imply that the rents will differ between projects and over time.
Why Fiscal Regimes for EIs?

iii. Large and volatile revenue
- usually paid by a few large taxpayers
- best addressed by having sufficient financial savings through an appropriate macro fiscal framework.
- risk of tax-base erosion and profit shifting given:
  - large presence of multinationals, and
  - cross-border transactions.
- state-owned enterprises, such as national oil companies play a dominating role; or
- small-scale mining, artisanal miners raise unique fiscal, regulatory, and environmental issues.
iv. Large investments and long recovery period

impacts the risk profile; and

changes the negotiation balance over the life of the project.

Investor will factor these into the risk assessment which may discourage investment.

government can seek to reduce risk perception over time by establishing a reputation of providing fiscal sustainability and taxpayer certainty.
Why Fiscal Regimes for EIs?

v. Uncertainty and Exogenous shocks.

¥ Needs a fiscal regime that adapts automatically:
¥ to perform satisfactorily for both the investor and the government under different potential project outcomes.
Roles of fiscal regimes

Most important benefits are fiscal - revenue accruing to government.

- main tool for the government and the investors to share fairly the risk and reward from extracting natural resources
- how the net cash flow is divided between the government and the investors.

- Government will aim at maximizing its take, and:
  - ensure sufficient investor return,
  - attractive as an investment destination.
Roles of fiscal regimes

Immediate ancillary benefits:

- Direct employment;
- Complimentary businesses (supplies, equipment, etc.).
Characteristics of Good Fiscal Regimes

A well-designed fiscal regime should:

i. strike a balance between two competing objectives:
   - maximizing government revenue
   - while attracting private investment.

ii. ensure fair sharing of risks and rewards between:
    - the owner of the resources (government in trust for its citizens), and
    - the investors (usually private concerns).
iii. be able to secure early and dependable revenues,
iv. ensure that the government captures a higher share of more profitable projects.
v. remain neutral by not warping investment decisions,
vi. be flexible and adaptable to changing circumstances,
vii. have terms that are clear and well disclosed
Characteristics of Good Fiscal Regimes

viii. be simple for taxpayers (especially investors) to comply with,

ix. have a revenue authority (government institutions) to administer,

x. have established laws that must be adequately administered.
There are two main fiscal regimes for the extractive industry:

i. Tax royalty regimes -
   - concessional

ii. Production Sharing arrangements –
   - Contractual
   - common for petroleum, but not so for mining.

iii. both regimes can also include some form of State equity participation.

A hybrid that combines a production sharing regime with tax royalty instruments is possible.
Types of Fiscal Regimes

- Concession-Based:
  - Tax and Royalty (& possible state participation)
- Contractual:
  - Risk Service Contracts
  - Production Sharing Contracts (PSCs)
- State Ownership:
  - Free equity
  - Carried interest
  - Paid-up equity
Types of FRs – Tax Royalty

Royalties –

i. Provide factor payments for a scarce resource to the resource owner;

ii. Minimum reserve price on extraction – reflects the opportunity cost of extracting today as against in the future;

iii. Royalty rate ensures that extraction is viable under current economic conditions including a minimum payment to the resource owner.
Types of FRs – Tax Royalty

Demerits –

i. Increases marginal cost of production – effective commodity prices post royalty is lower;

ii. Experience shows that it is not effective in providing a higher share of economic rent for more profitable projects;

¥ Royalty rates are therefore varied by commodity prices or production levels. This is complex and not perfectly correlated with actual profitability.

¥ Better to use modest flat Royalty rates with profit based taxes that respond to profitability
Types of FRs – Production Sharing

Mechanisms of Production Sharing Contract (PSC):

i. Provision for an explicit royalty payment to government;

ii. Proportion of total production after Royalty to be retained by the contractor to cover cost – Cost Petroleum (CP);

iii. Remaining petroleum including any surplus over and above CP – Profit Petroleum (PP);

iv. PP is shared between the government and contractor (Contractor’s Oil) at an agreed rate.
Other issues:

- Some PSCs provide for Corporate profit tax levied on Contractors; OR
- Income tax liability included in the government share of PP.
- Contractors Share = CP + CO (%PP) - CPT
- Total Government Share = Royalty + %PP + CPT
- Cost Recovery Limit (CRL) for CP
- this implies that there will always be some production to be shared by government from the start of production.
Other issues:

 Implicit Royalty

 if:

 i. volume of Production to be shared is $100
 ii. CRL 60% then CP = $60
 iii. PP = $40
 iv. Government Share of PP is $24
 v. Implicit Royalty Rate = (60%*(1-60%)) = 24%
 vi. Explicit Royalty (ER) = 10% = $10
 vii. Effective Royalty Rate = 10% + (24%*(100%-10%)) = 31.6%
 viii. Effective Royalty = 10%*$100 + 24% ($100-$10) = $10+$21.6=$31.6
ii. Risk Service Contract -

￥ a company is contracted to develop and produce petroleum in return for an agreed remuneration.

iii. Direct State Participation - Very common,

￥ National oil company:

￥ may enter into joint venture arrangements with private sector companies.
Types of FRs – Production Sharing

Equity position in a mine or petroleum project:

Government can finance its position:

i. free equity - government takes a share of the profits of the project but does not contribute to the capital investment or operating costs.

ii. carried interest - investor meets all the costs attributable to the government during exploration, appraisal, and even development, after which the state meets its prorated share of operating costs in a similar fashion to the investor,

iii. fully paid equity - the government covers the share of development and operating costs in proportion to the equity share held in a project.
## Types of FRs - Examples

### Fiscal Regime Types, Mining and Petroleum

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of countries</th>
<th>Tax-royalty</th>
<th>Production sharing</th>
<th>Risk-service</th>
<th>State participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia and Pacific</td>
<td>11</td>
<td>2</td>
<td>10</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Europe, Middle East, and Central Asia</td>
<td>25</td>
<td>8</td>
<td>17</td>
<td>1</td>
<td>11</td>
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<tr>
<td>Latin America and the Carribean</td>
<td>11</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>30</td>
<td>9</td>
<td>21</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>High-income, advanced economies</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>30</td>
<td>54</td>
<td>3</td>
<td>50</td>
</tr>
</tbody>
</table>

(In number of countries)

<table>
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<tr>
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<td>24</td>
<td>14</td>
</tr>
<tr>
<td>High-income, advanced economies</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>19</td>
</tr>
</tbody>
</table>

(In percent of total)

Source: IMF FARI Fiscal Regime Library

1/ Some countries have more than one fiscal regime so the number of regimes exceed the number of countries

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FRs Legal Framework

FR designed and implemented through:

- general legislation – generally preferable
- by project-specific contracts.

The general legislative framework for the mining:

- either be incorporated in the income tax legislation,
- stand-alone legislation for more specialized taxes for extractives,
- sector legislation for some instruments, such as royalties.
FRs Legal Framework

Provisions:

i. Fiscal Stability
   ¥ agree-to-negotiate formulation,
   ¥ frozen law formulation,
   ¥ credibility by minimizing policy changes or making these more predictable.
   ¥ adaptable (or progressive) fiscal regime - government take adjusting automatically to the realized profitability of the project,
   ¥ will reduce the need for discretionary policy changes.
FRs Legal Framework

Provisions:

ii. Granting of Rights

Rights to explore and extract mining and petroleum resources is guided by relevant sector legislation

- competitive process — usually through a bidding process in an auction—or administratively, on a first-come-first-served basis.
Background:

- 1956 – discovery by Shell-BP (sole concessionaire) after 50 years of exploration.
- 1958 – oil producer (1st oil field producing 5,100 bpd).
- After 1960 - onshore and offshore exploration rights extended to other foreign companies.
- 1971 – joined OPEC (global rise in crude prices)
- 1977 – established Nigerian National Petroleum Company (NNPC) - a state owned and controlled company.
FR in Nigeria

1991 – Joint Operating Agreement (JOA)

- Tax inversion rate of 35% - to encourage unit cost efficiency;
- Guaranteed Notional Margin:
  - $2.50/bbl., after Tax and Royalty to the company in its equity crude;
  - A minimum of $1.25/bbl. after tax and Royalty on the NNPC Crude which it lifts under the MOU.

- Cost
  - i and ii holds if Technical Cost of Operations is not more than the notional fiscal technical cost = $4.00/bbl..
  - ii. If in any one calendar year, a company's Capital Investment Cost exceeds $2.00/bbl. on average:
    - i and ii increased to $2.70/bbl. and $1.35/bbl. respectively.
FR in Nigeria

Production Sharing Contracts – was adopted as a result of:

i. imbalance in the financial capacity of the different JV Partners, especially the Nigerian government;

ii. high geological risk associated with deep water and inland basins exploration;

iii. desire of the Government to retain title to the oil concession; and

iv. Aspiration to increase the nation’s reserve base.

¥ Oil Prospecting License (OPL) – exploration and prospecting:

¥ IOCs bids for and is awarded the right to explore and produce oil and gas. The OPL is granted in the name of NNPC.

¥ IOC executes a PSC with NNPC as a contractor for the exploration and production of OPL.

¥ Oil Mining License (OML) - granted if oil is found in commercial quantity.
FR in Nigeria

PSCs key provisions:

i. Location - deep offshore and inland basin with.

ii. Period of 25-30 years.

- OPL minimum period of 5 years and an aggregate period of 10 years,
- OML is for 20 years.

iii. Contractor bears all the cost of exploration, and if oil is found, it also bears the cost of the ensuing development and production operations.

iv. Contractor has no title to the oil in the ground but to the oil produced.

v. Commercially viable natural gas discovered – contracted separately
FR in Nigeria

BScs key provisions:

i. Location - deep offshore and inland basin with.

ii. Period of 25-30 years.
   - OPL minimum period of 5 years and an aggregate period of 10 years,
   - OML is for 20 years.

iii. Contractor bears all the cost of exploration, development and production operations.

iv. Contractor has no title to the oil in the ground but to the oil produced.


vi. Contractor to pay production bonus on attainment of certain level of production.
Crude oil produced is allocated as follows:

<table>
<thead>
<tr>
<th>S/N</th>
<th>Name</th>
<th>Features</th>
<th>Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Royalty Oil</td>
<td>Quantum of available crude oil that will generate and amount of proceeds equal to actual payment of royalty and concession rentals</td>
<td>NNPC</td>
</tr>
<tr>
<td>2.</td>
<td>Cost Oil</td>
<td>Quantum of available crude oil the for recovery of operating costs after the allocation of Royalty Oil</td>
<td>Oil Co.</td>
</tr>
<tr>
<td>3.</td>
<td>Tax Oil</td>
<td>Quantum of available crude that will generate an amount of proceeds equal to the actual Petroleum Profit Tax liability payable during each month.</td>
<td>NNPC</td>
</tr>
<tr>
<td>4.</td>
<td>Profit Oil</td>
<td>Balance of crude oil after deducting Royalty oil, Tax oil and Cost oil</td>
<td>NNPC and Oil Co.</td>
</tr>
<tr>
<td>5.</td>
<td>Production Bonus</td>
<td>Contactor pays 100,000 barrels or cash equivalent at cumulative production levels of (a) 50 million barrels and (b) 100 Million barrels.</td>
<td>NNPC</td>
</tr>
</tbody>
</table>
Thank you for your attention.

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