

THE EVALUATION OF THE TANZANIAN PETROLEUM FISCAL REGIME TO PROJECTS PROFITABILITY

Lulu Silas Olan'g



Introduction

- Main objective of the study is to find out how the current design of the Tanzanian fiscal system responds to the economic situations looking at prices and costs relative to the profitability of the upstream petroleum project in different field sizes.
- Specifically looking at how flexible the system is in balancing government's and investor's objectives and comparing to other system/tool

PSA terms	Rate
Royalty	7.5% of net Revenue
Corporate income tax	30%
Depreciation Allowance	20%
Cost oil	50% of revenue less royalty
Profit sharing	based on the daily production of gas
Additional Profit Tax	RROR ≤ 20: 0% 20 ≤ R ≤ 30: 25% >30: 35%

METHODOLOGY

- Discounted cash flow analysis
- Sensitivity analysis
- Monte Carlo Simulation

DATA

	500	1000	2000	
Reserves	500	1000	2000	Billion Cubic feet
Development costs	15	12.5	10	\$ Per Barrels of Oil equivalent
Drilling costs	50	40	35	% of development cost
Operating costs	6.75	6.0	5.25	% of accumulated development cost
Price	8.36	8.36	8.36	Per MMBTU

SENSITIVITY ANALYSIS

Inputs analysed for Pre Tax and Post Tax NPV and on Government take

- Price, Production, Development and Operating costs

MONTE CARLO SIMULATION

Done on Pre-tax & Post Tax NPV and Government take

Variables of Uncertainty: Price & Development cost

RESULTS

Pre Tax

Description	Field 1	Field 2	Field 3	Unit
Reserves	0.5	1	2	
Pre Tax NPV	1,086	2,184	4,240	Million \$
Pre Tax IRR	28	26	26	Percent
Pre Tax NPV/I	0.92	1.1	1.4	

Post Tax

Reserves	0.5	1	2	Tcf	
Govt.PV cash flow	956.92	1819.65	3451.35		Million \$
Govt share of economic rent	88	83	81		Percent
Royalty Paid	379	799	1,729		Million \$
Post Tax NPV	129.49	365.33	789.20		Million \$
Post Tax IRR	13	14	14		Percent
Post Tax NPV/I	0.11	0.19	0.27		

Sensitivity Analysis

Effect is highly from Price-Deve, Production-Operating cost.

On Government take: Price-Production-Deve-Opex.

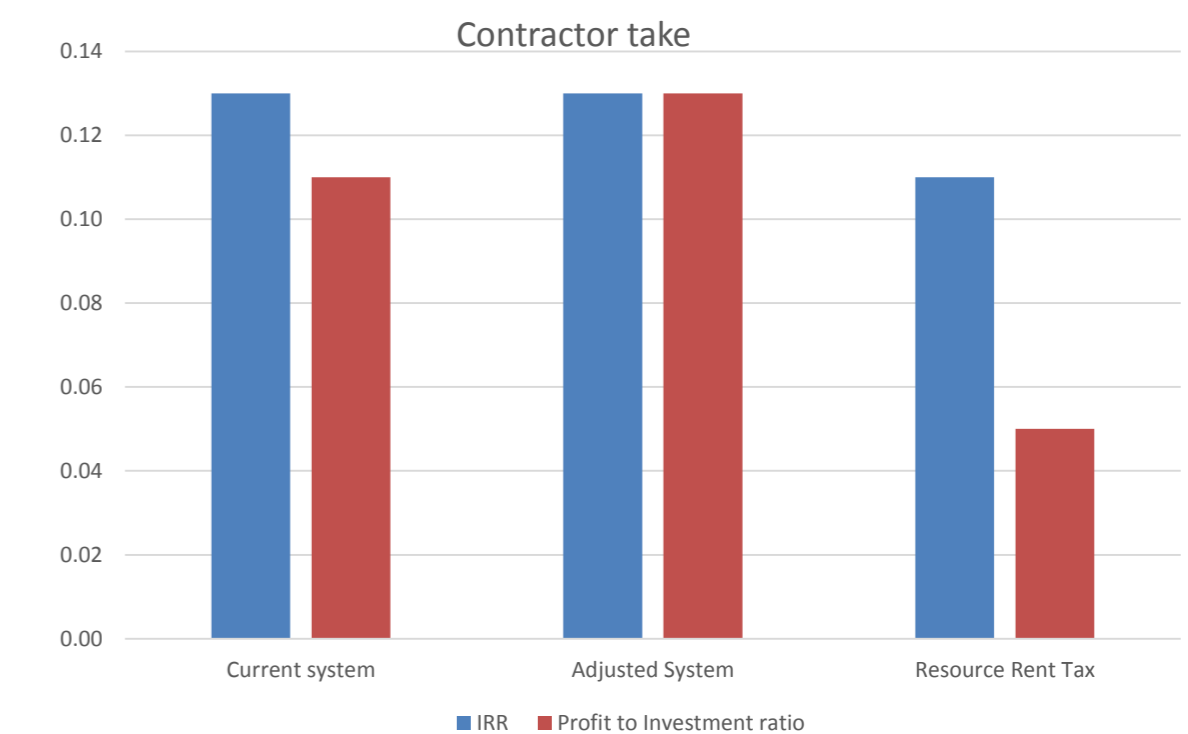
Monte Carlo Simulation

price uncertainty for field 1,2 & 3 certainty levels are 79.38%, 89.92% and 94.59% respectively

Deve: Field 1- 83.26%, field 2-93.18% Field 3- 96.84%

Government is guaranteed to get revenues 100%

Current system vs RRT and Alternative term(no APT)



Conclusion: larger field is reasonably profitable under the current regime, small field is more attractive with no APT being paid. Government and Investor objective are balance at gas prices 8.36 and above.