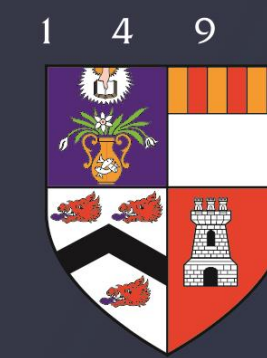


Evaluating the effectiveness of the petroleum fiscal policy system of Ghana and alternatives to maximize government revenue

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1. Background

- Ghana's petroleum industry has experienced a significant growth hence the need to assess its fiscal system to measure government profitability.
- This study aims to evaluate the effectiveness of the current Royalty and Tax system of Ghana, analyzing based on the Jubilee field production.
- It examines whether the fiscal system is able to collect optimal revenue to government without causing distortion.
- The fiscal regime should meet all criteria of an efficient system while attracting investment.

2. Methodology



Discounted Cash Flow (DCF) Analysis

- Definition of Basic inputs including field size, oil price, cost and Tax rates.
- Determination of Cash Flows
- Calculation of NPV, IRR, Payback Period and Percentage Takes.

Sensitivity Analysis

- To identify how Field size, Oil prices, Opex, Devex, Discount rate, inflation and Taxes impact the NPVs and IRRs of the projects.
- Tornado Diagram and Spider Charts.

Monte Carlo Simulation

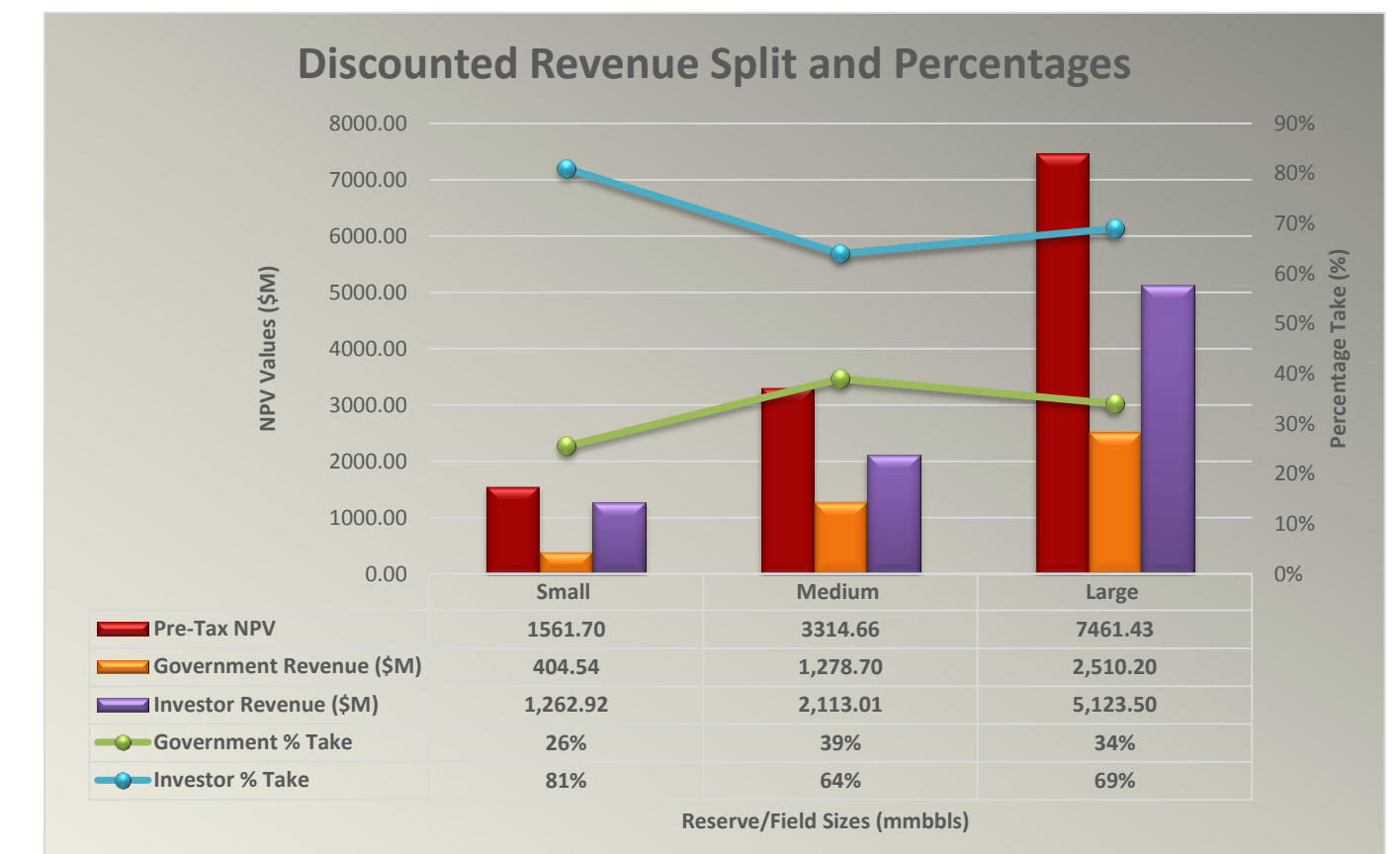
- Determined the risks and uncertainties in the variables used for the project evaluation.
- Analyzed based on Government take and post-Tax NPV.

3. Results

Base Case Result

Profitability indicators	Small Field	Medium Field	Large Field
Pre-Tax NPV (\$M)	1,561.70	3,314.66	7,461.43
Post-Tax NPV (\$M)	1,262.92	2,113.01	5,123.50
Project IRR (%)	57	24.7	33.7
Government Take NPV	404.54	1,281.50	2,514.07

Profit Sharing



4. Conclusion

- Ghana Petroleum Fiscal System is not robust to oil price volatility and cost even though proves fields economic.
- The system is distinctively regressive and collects less rent to government.

Recommendation

- Government should modify its terms to include profit sharing contracts to help collect more revenue.
- Negotiations should be directed towards improving government percentage take whereas attracting investment.