Issues in Petroleum Taxation: An Evaluation of the sustainability of Ghana's Upstream Petroleum Fiscal Regime and its Revenue Potential

Felicia Pomaah Djang

1495 UNIVERSITY OF ABERDEEN

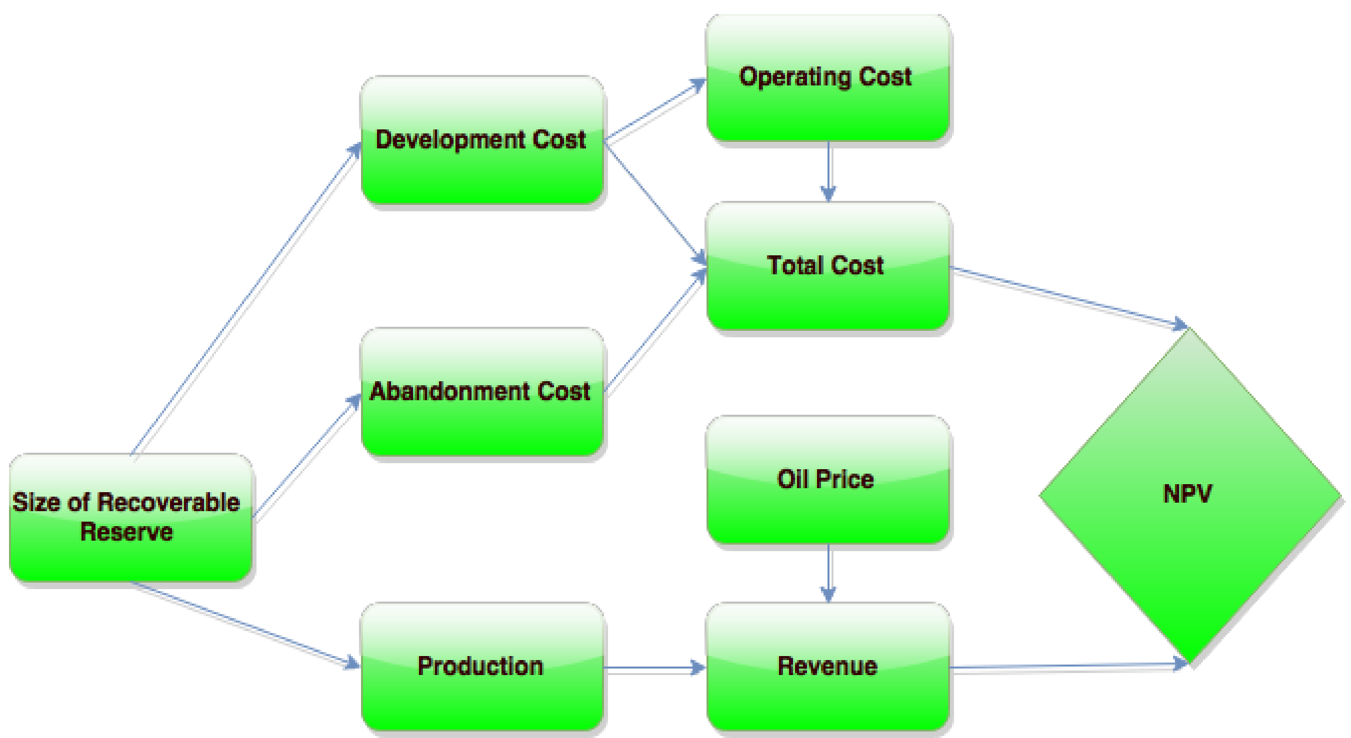
INTRODUCTION

- Ghana currently employs the use of the concessionary fiscal arrangements in its upstream petroleum operations
- This study evaluates the sustainability of Ghana's upstream petroleum fiscal regime against key features of optimal fiscal policy: its target on economic rent, neutrality, progressivity and flexibility and its risk sharing characteristics
- The study also compares fiscal terms of Ghana to that of Norway

METHODOLOGY

- The DCF model was constructed using three representative offshore fields: Large (500mmbls), Medium (250mmbls) and Small(100mmbls)
- Main Fiscal Devices: Royalty (5%), Petroleum Income Tax (35%), Additional Oil Entitlement, Carried Interest (10%) Norway: RRT (51%), Income Tax(27%)
- Project Performance Metrics: NPV,IRR,NPV/I

Flow of model

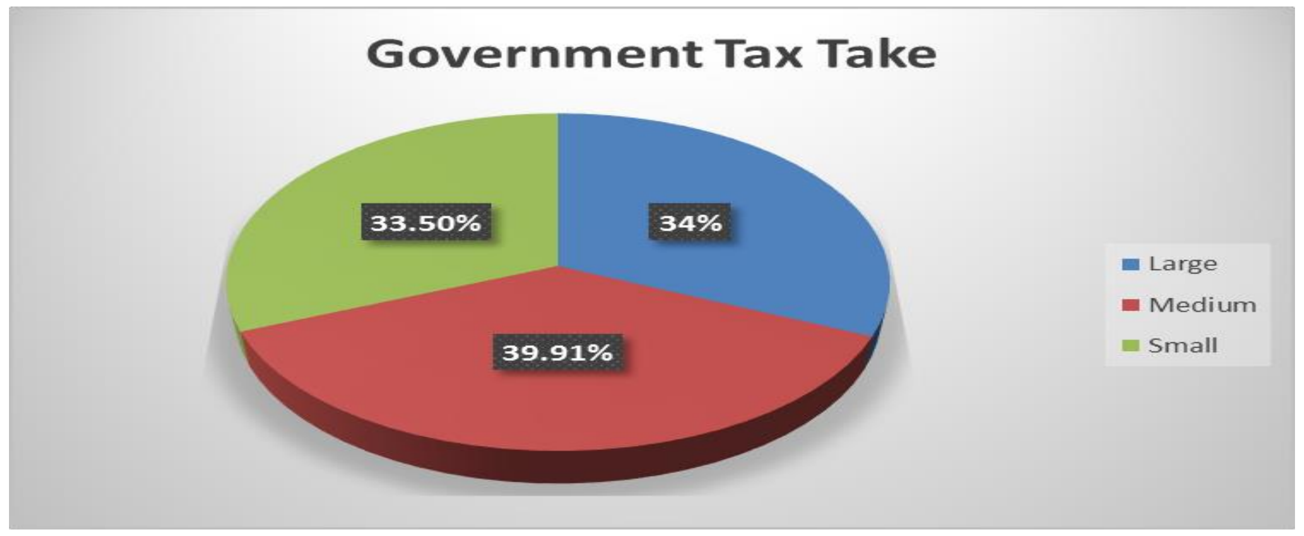


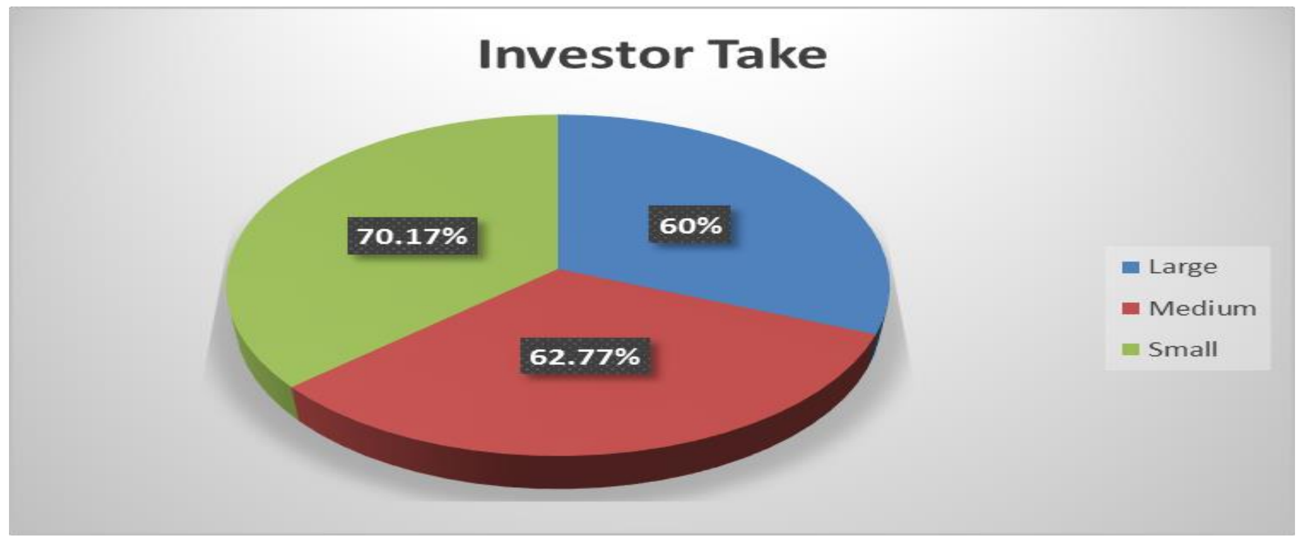
RESULTS

Base Case

Profitability Metrics (REAL TERMS)	Large	MEDIUM	LOW
Pre-Tax NPV	$6626.63	$2677.43	$1055.95
Post Tax NPV	$3980.42	$1680.60	$740.95
Pre-Tax IRR	38%	27.25%	26.95%
Post Tax IRR	32%	22.48%	23.01%
Profitability Index	0.52	0.4	0.37
% GovtT ax Take	34%	39.91%	33.50%
%Govt Tax Take with Carried Interest	55%	68.91%	64.09%

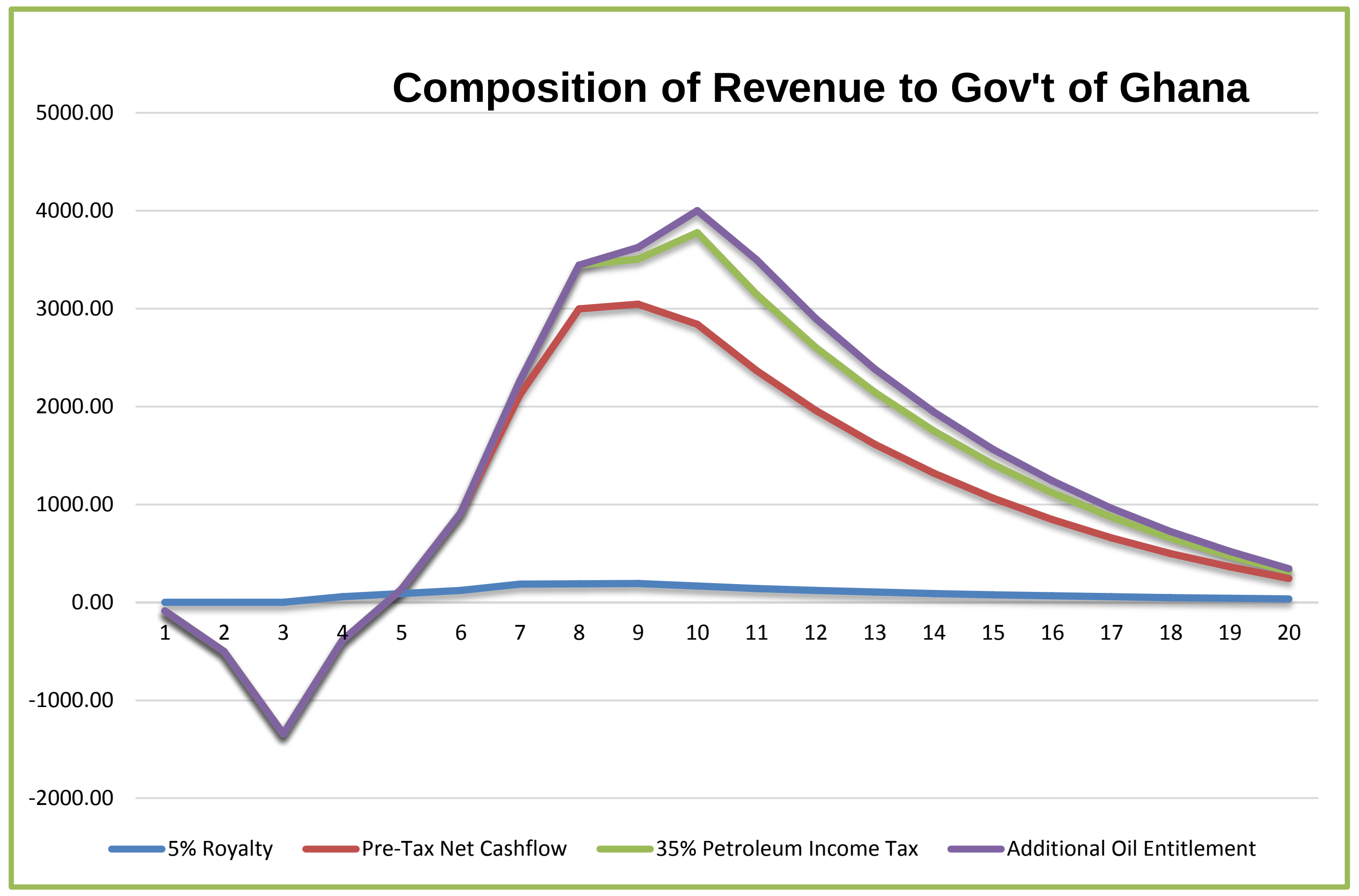
Share of Economic Rent





Sensitivity and Monte Carlo Results

Sensitivity and Monte-Carlo indicate that importance of oil price, development cost and total field production on project NPV. Small and medium fields are rendered uneconomic under conditions of uncertainty



CONCLUSION

- Ghana's current Concessionary Fiscal Regime is not sustainable because of its regressive behaviour
- Government Share of Economic Rent decreases with increasing field size and profitability
- Current regime may however be sustainable in the short run but when large discoveries are in the long run, system cannot capture maximum economic rent

RECOMMENDATION

- **Like Norway, Government should abolish the Royalty**
- **Additional Oil Entitlement should be replaced with RRT**
- **Ceiling on cost recovery necessary**
- **Government must increase its participation in the form of Carried Interest if it is to capture maximum revenue**

Felicia Pomaah Djang f.pomaah.djang.14@aberdeen.ac.uk +44 (0)7570660781 www.abdn.ac.uk
Msc(Econ), Petroleum, Energy Economics and Finance, University of Aberdeen, King's College, Aberdeen, AB24 3FX