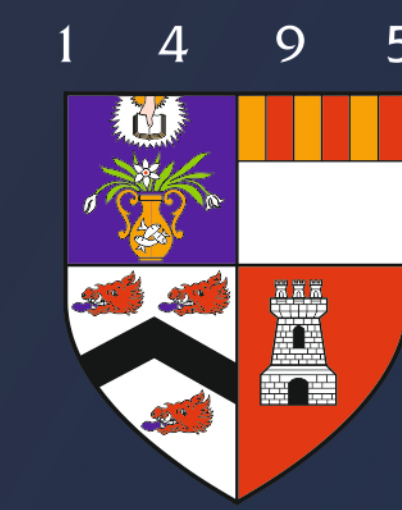


# INFRASTRUCTURE DEVELOPMENT FOR A GAS RESOURCE COUNTRY: TANZANIAN CASE STUDY

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## INTRODUCTION

- Tanzania still faces doubts in energy security and supply despite its recent Offshore Natural gas discoveries totalling 57.25 TCF.
- Country relies upon traditional fuels and Imported fuels to feed its energy demand.
- Lack of infrastructure capacity have derailed its progress towards maximizing these resources.
- Proposal for construction of distribution networks
- The research evaluates the economic viability of the proposed gas distribution network in DSM.

## METHODOLOGY

### ➤ *Deterministic Approach*

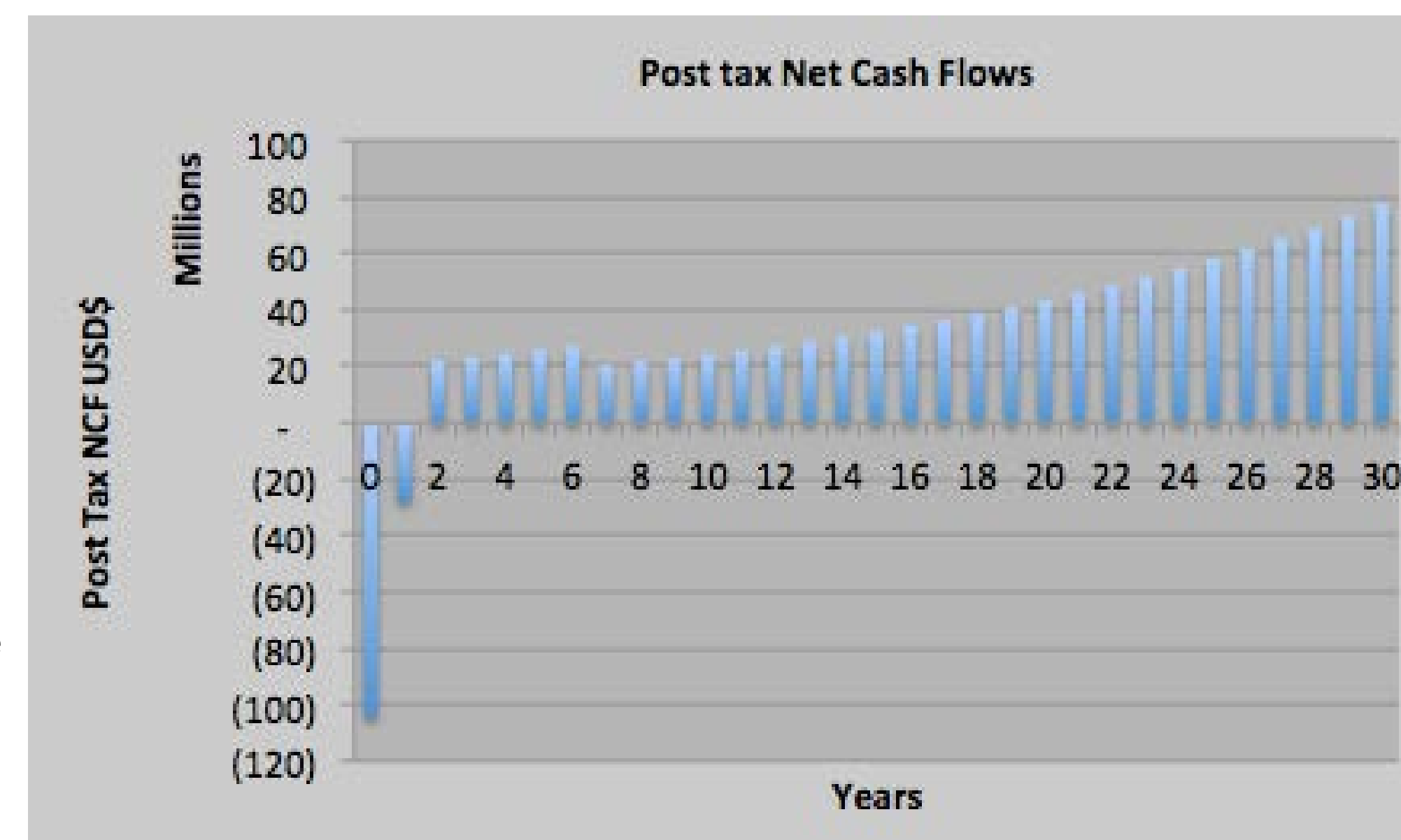
- The DCF model was constructed using data from EWURA, TPDC and the NGUMP.
- A cost benefit analysis was conducted to determine the profitability of the project
- Key performance indicators where NPV, IRR and NPV/I

### ➤ *Sensitivity Analysis*

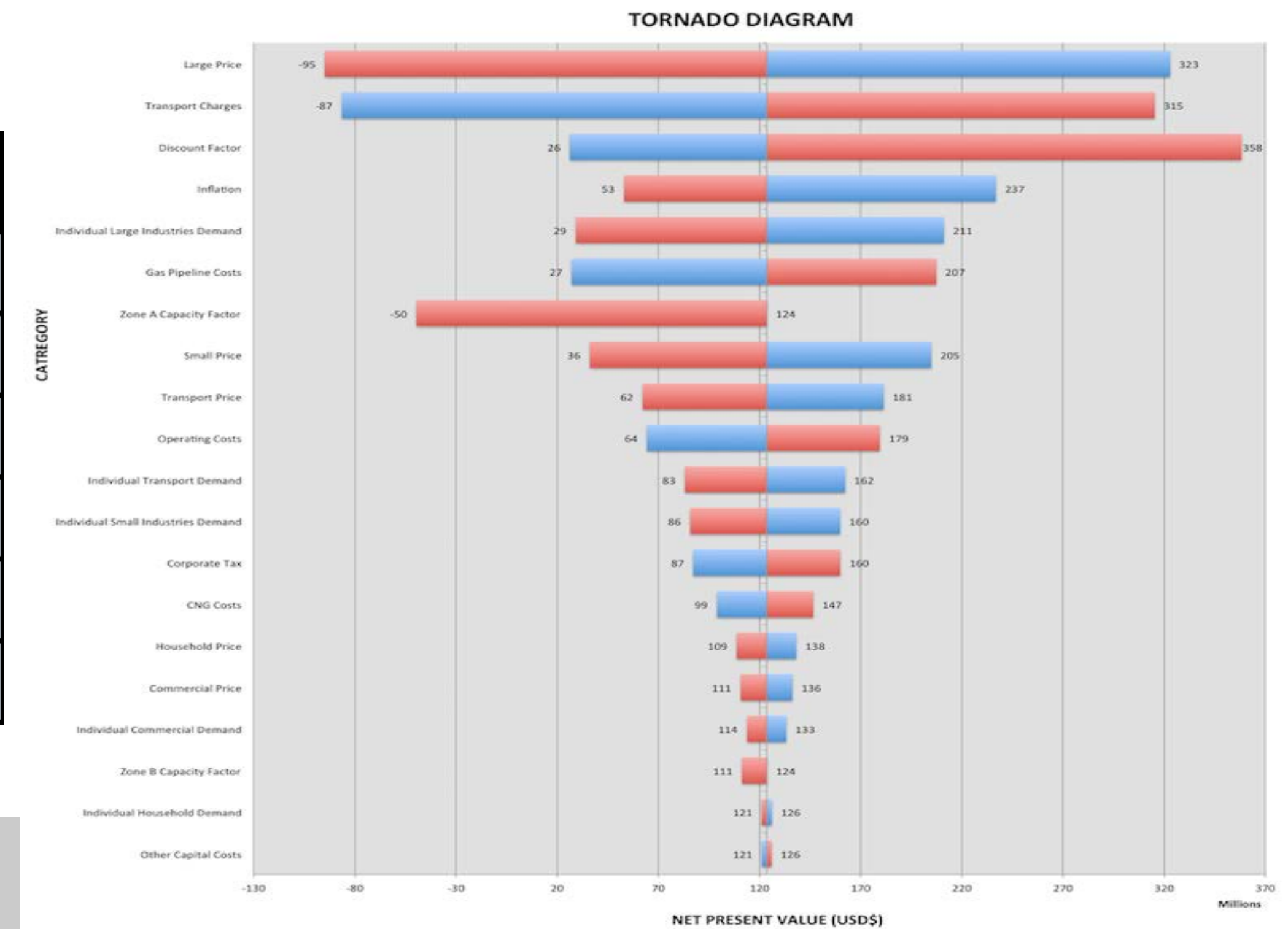
- Sensitivity analysis was conducted on gas price, transport charges, Capacity utilisation, Capex, Discount rate, Demand and Other costs.

## RESULTS

Summary Output	
Pre Tax NPV	\$196,292,086
Post Tax NPV	\$123,557,855
Post Tax Internal Rate of Return	17%
NPV Capex	131,560,000
Profit-to-Investment ratio	0.939174938
Appropriate Simple Payback (years)	7 yr(s)



- Post Tax NPV seems to be highly affected by the price and demand of Large Industries, transport charges, discount rate, inflation, flowrate serving industries and transport sector and pipeline costs.
- The project is specifically affected by capacity factor of pipeline serving Industries and Transport customers.



## CONCLUSION

Overall, the Investment into gas distribution networks for DSM is economically viable.

However the government should also emphasis on promoting consumption on other areas also since the project is essentially run by Large Industries consumption and connction to the network.

CNG offers numerous possibilities of expanding the market base i.e. could be used to supply to customers far from the network connection.