Title: Economic Analysis of the Potential Benefits to Nigeria of the New Dangote refinery
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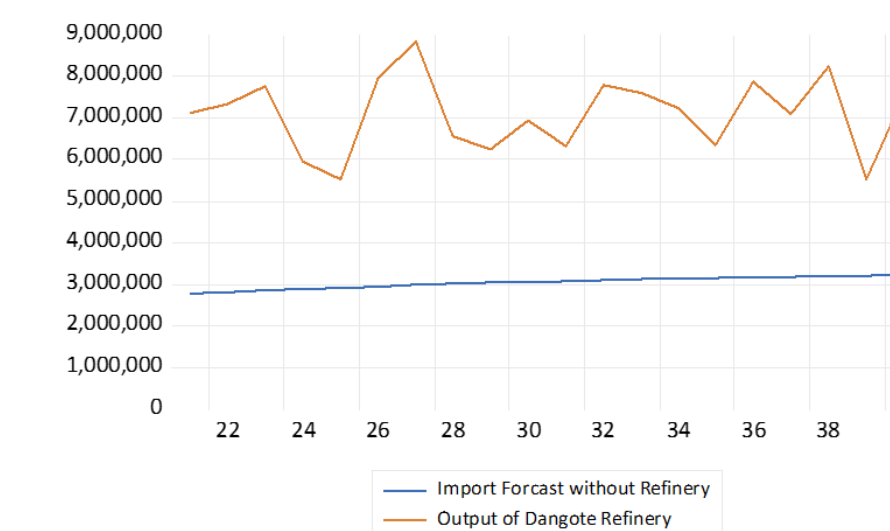1 4 9 5
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Background of the Topic

Nigeria is among the largest oil producers and consumers in the world. The lack of sufficient domestic refining capacity necessitated the country to rely on the import of petroleum products. Adequate domestic refining capacity can substitute the import, improve its deficit balance of payment (BOP), add value to GDP, strengthen Naira, etc. Fortunately, a Dangote refinery with a projected refining capacity of 650,000 barrels per day is under construction in the country and is expected to begin operation in 2023.

Dangote Refinery Configuration

- Estimate the contribution of the Dangote refinery to Nigerian BC Import Substitution

- Estimate the contribution of the refinery to Nigerian GDP – Valu added

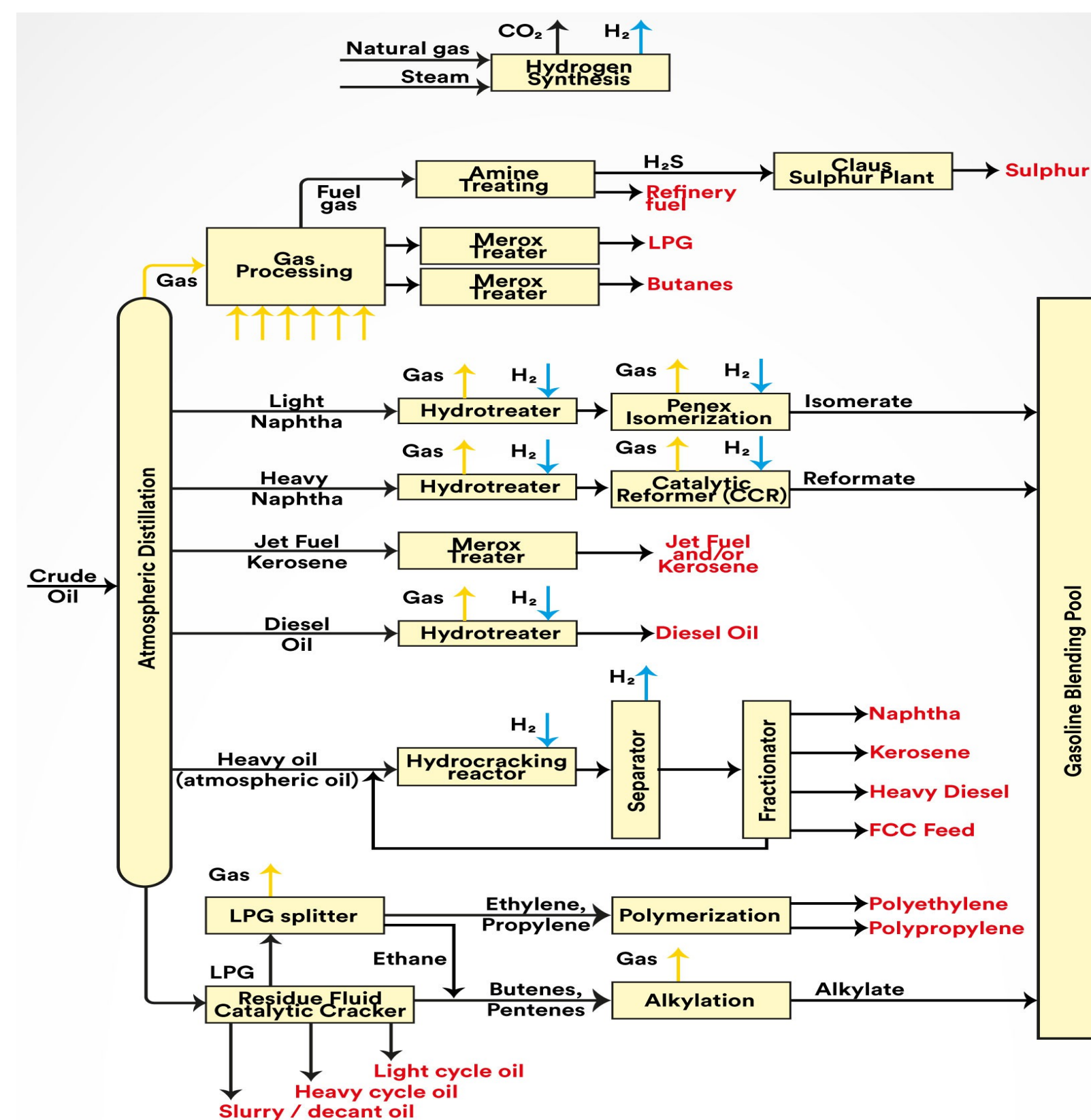## Methodology

1. Time series Econometric Modelling
   - Multivariate time series model (ARDL(4,4,4,4) model) for forecasting future values of Nigeria's Total Balance of Trade without the refinery's contribution
   - Univariate time series model)ARDL(3) and ARDL(4)) for forecasting future values of Nigeria's oil-import and GDP without the refinery's contribution
2. Sensitivity analysis and Monte Carlo simulation for predicting the refinery's output, input , output price, and input price future values.

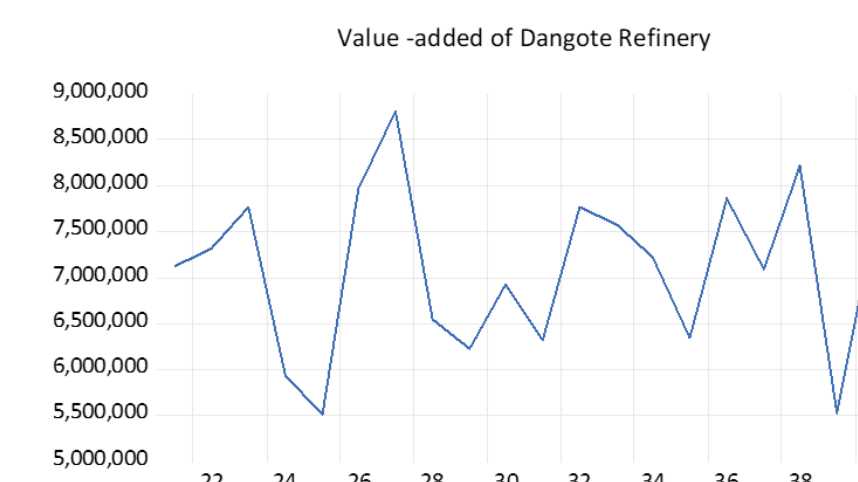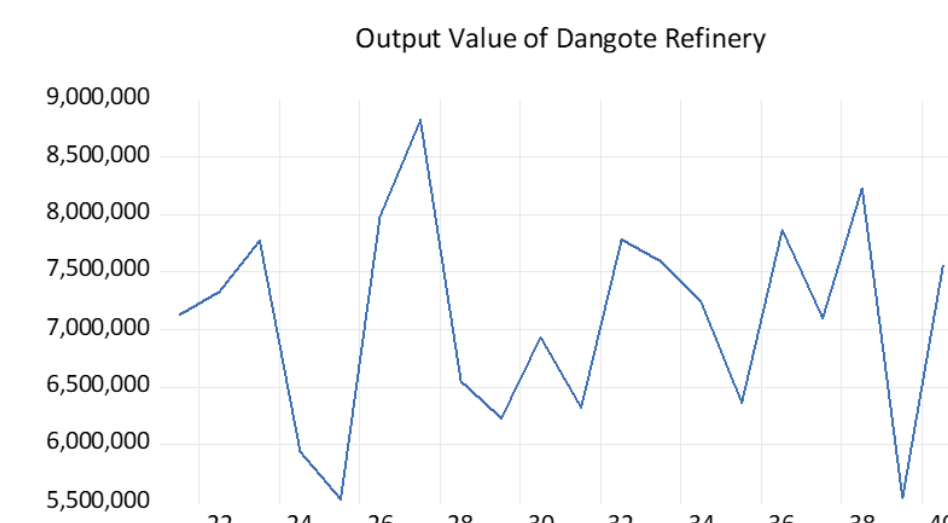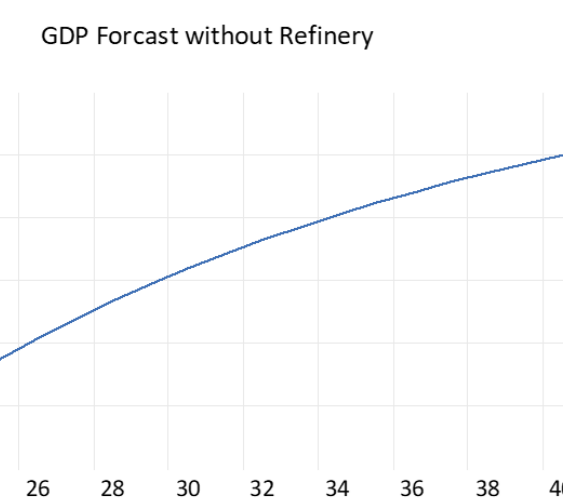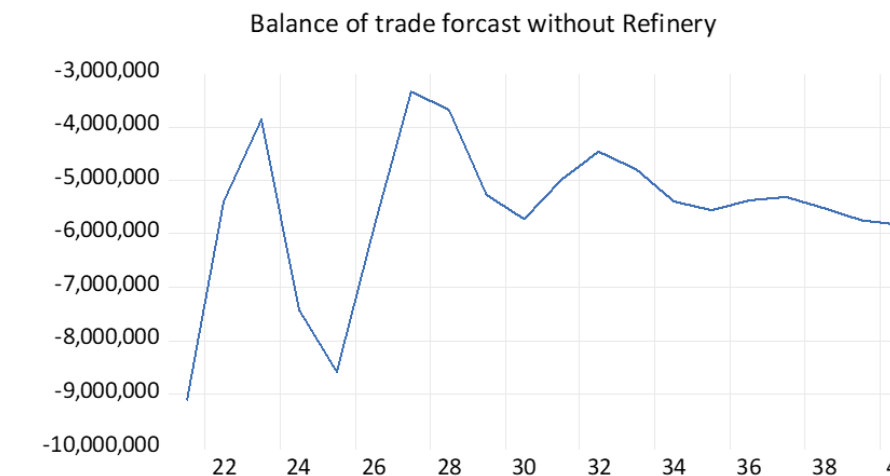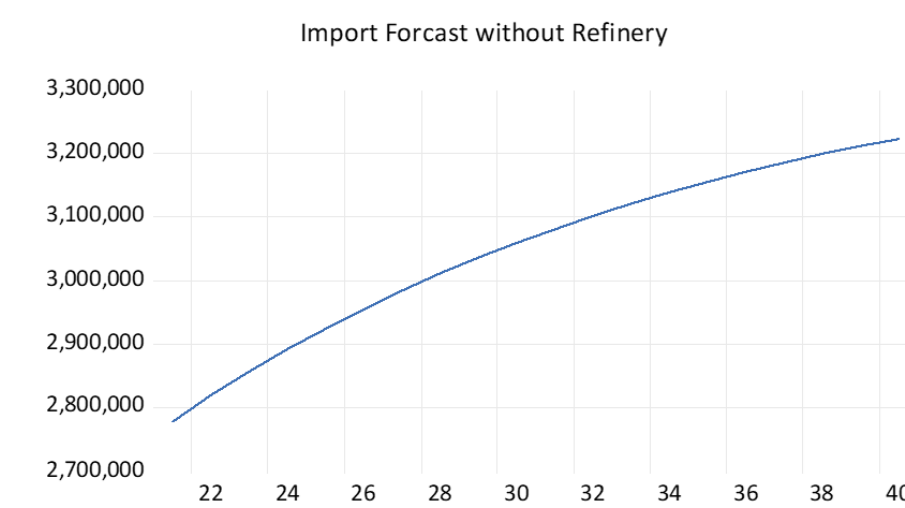## Results

Import forecast without refinery vs output of Dangote refinery

Import Forecast without Refinery

Balance of trade forcast without Refinery

GDP Forcast without Refinery

Output Value of Dangote Refinery

Value -added of Dangote Refinery

- Without the refinery, Nigeria's BOP deficit will escalate
- The refinery's output will satisfy local demand and export surplus.
- The country's GDP will be enhanced by the refinery's added-value

Conclusion

- The refinery will completely substitute Nigeria's petroleum products import and export surplus to generate foreign exchange which will remedy the country's deficit BOP and depreciation of Naira to foreign currencies, improve GDP, etc.
- The colossal refinery might abuse the dominant market position if the government fail to create an enabling environment for competition.
- Note that findings are based on the assumptions incorporated in the modelling and on some policies example subsidy removal in 2023.

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