WITS UNIVERSITY

Wits Business School

AFRICAN ENERGY LEADERSHIP CENTRE

First of its kind in South Africa and on the continent

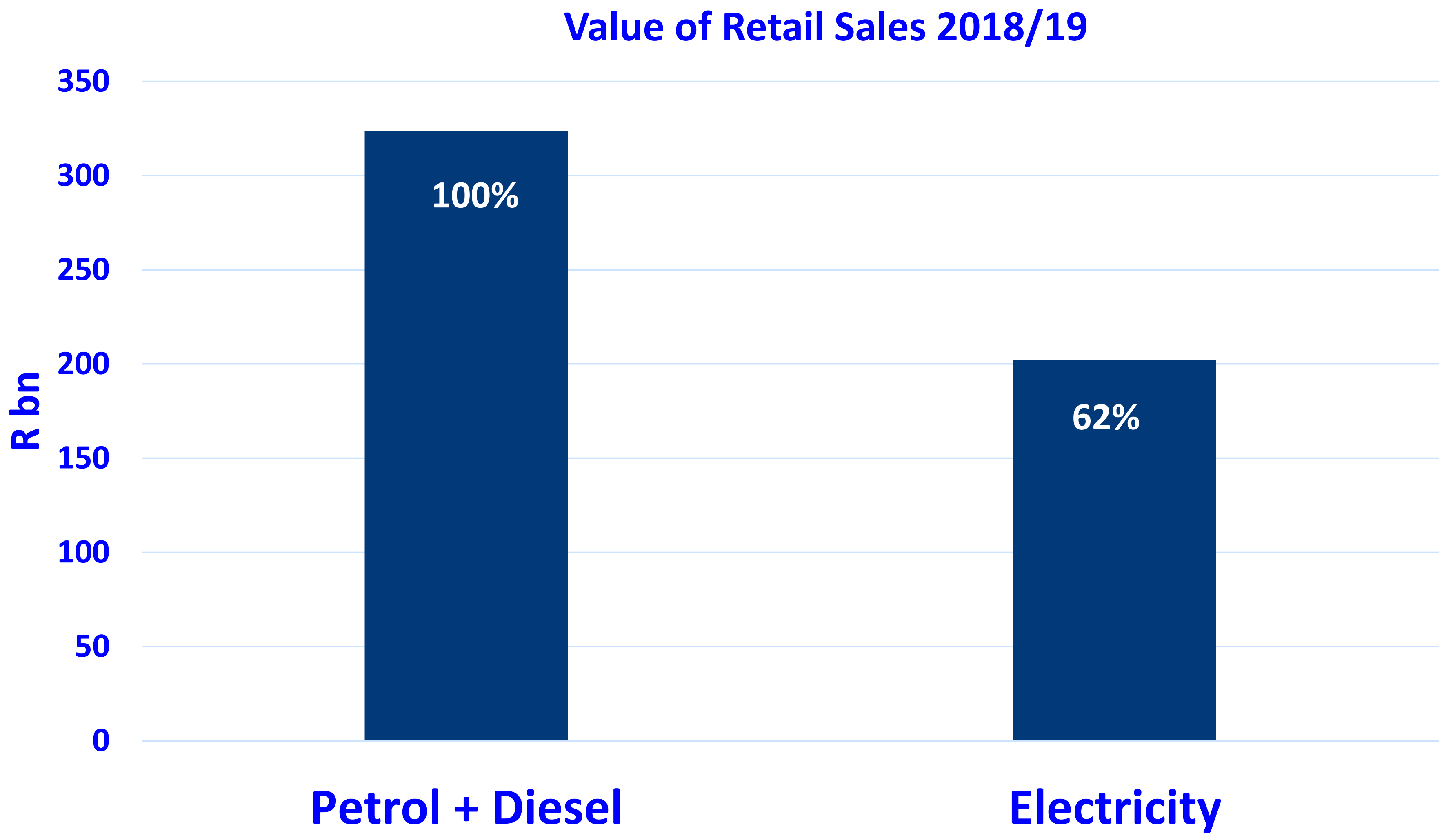
WIDER Working Paper 2020/140

Petrol price regulation in South Africa

Is it meeting its intended objectives?

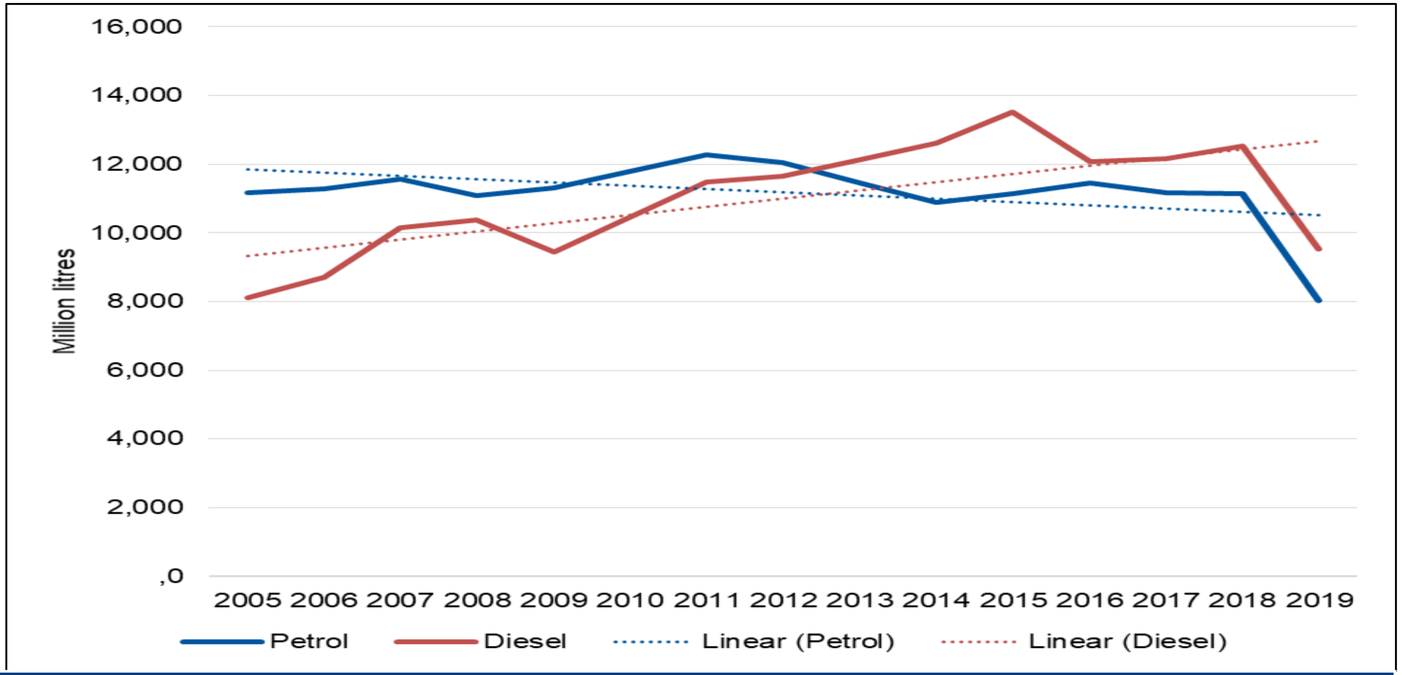
Rod Crompton,[1] Midesh Sing,[2] Vernon Filter,[3] and Nonhlanhla Msimango[4]

Some Perspective



Some Perspective

1. Diesel volumes > petrol
2. Petrol price is regulated, diesel is not.
3. Petrol + diesel volumes shrank at a CAGR of −0.7 per cent between 2005 and 2019.



Petrol margins, taxes, and levies (Real) 2000-2019

	CAGR %	Share of price
Total taxes and levies	3.10	40%
Total regulated margins	3.95	60%

Possible Petrol Price savings

RAS Retail Margin	RAS Feb 2020	Corrected WACC Calculation	More Appropriate Margin [50% debt]	More Appropriate Margin [Debt 70%]
Operational Expenditure	119.04	119.04	112.69	112.69
Total RAS YIELD Retail Margin	92.11	83.54	48.17	42.65
Yield [BSS Capex *WACC]	62.91	54.34	48.17	42.65
Entrepreneurial Compensation	29.20	29.20	0	0
Total RAS Retail Margin	211.15	202.58	160.86	155.34
Difference cpl		-8.57	-50.29	-55.82
Staffing costs cpl			-20 to-30	-20 to-30
Total Saving cpl			70 to 80	75 to 86
WACC (real Pre-tax)	18.77%	16.21%	14.37%	12.72%
Nominal Equity IRR [40 Years]	39.3%	27.0%	21.3%	23.6%

Owners Remuneration and Entrepreneurial Compensation

	Basic Service Station	Efficient Service Station 1	Efficient Service Station 2
Total Volume sold [million litres p.a]	2.7	5	12
Annual Remuneration			
Owners Remuneration [Fair compensation for managing the station] 16 cpl	R 436 891	R 783 000	R 1 879 200
Entrepreneurial Compensation 29 cpl	R 809 057	R 1 450 000	R 3 480 000
Return on assets (WACC 18.77% real) 63 cpl	R 1 755 095	R 3 145 500	R 7 549 200
TOTAL	R 3 001 043	R 5 378 500	R 12 908 400

What policy objectives is petrol price regulation trying to achieve?

Is petrol retailing a natural monopoly? No.

Are there natural monopolies in the value chain? Yes, SBM and some pipelines (NERSA regulated).

Policy Objectives:

a) Deregulation and competition /market related pricing (White Paper on Energy Policy 1998)

b) Industrial policies:
   a) Import Substitution Industrialisation (1930s to present)
   b) Security of supply / Industry profitability (1970s to present)

c) Social Policies: (1998 to present)
   a) 'affordable prices', internationally competitive and fair prices
   b) BEE
   c) Small business promotion
   d) Employment opportunities

Regulation – theoretical review

Shortcomings – various – see document

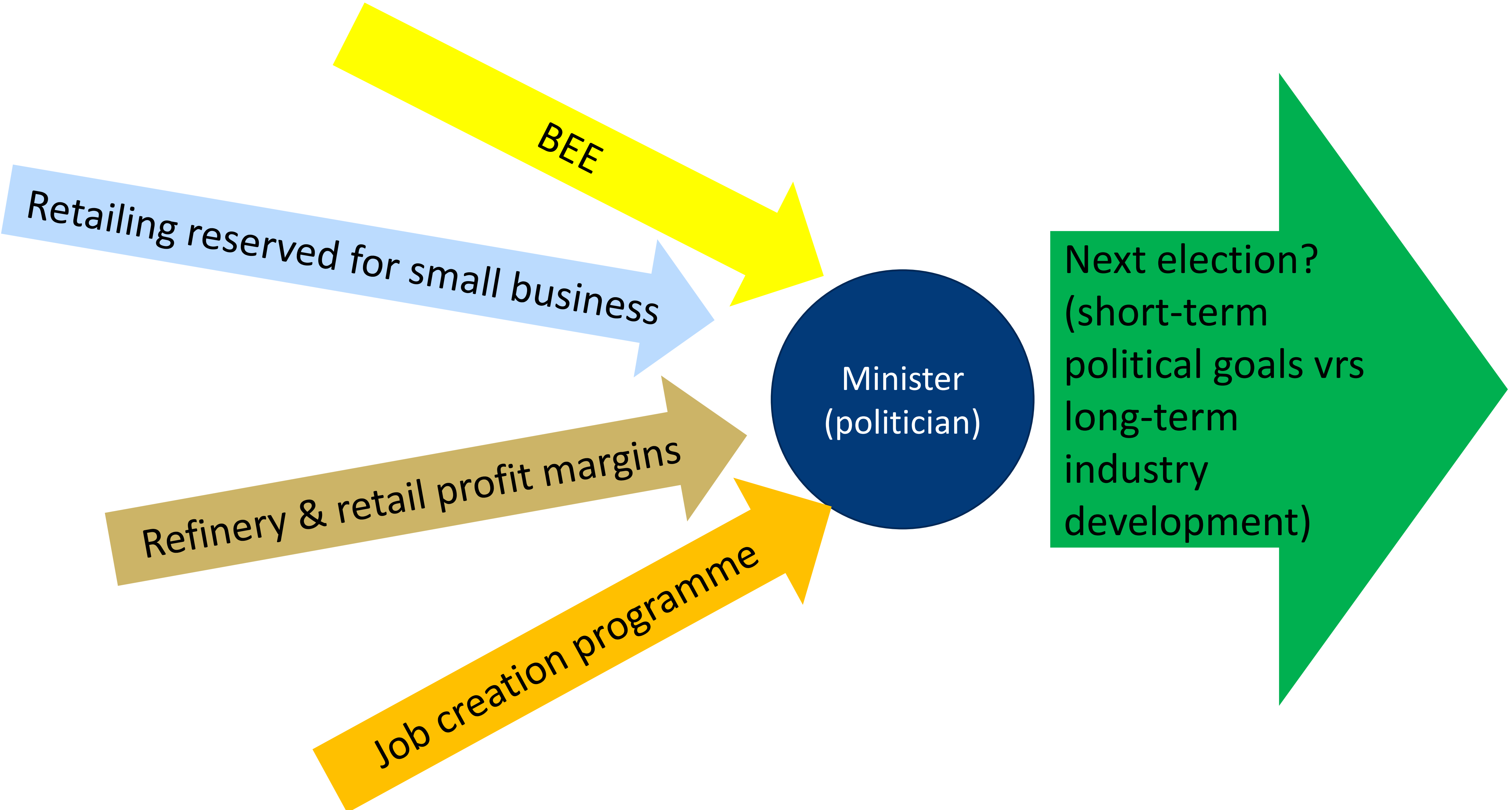
Institutional Design

OLD MODEL	NEW MODEL
Minister	**Independent Regulator**

- Principal–agent relationship between the government and the regulator is absent
- Not suited to economic trade-off decisions in infrastructure industries

e.g. Electricity, Gas, Petroleum Pipelines, Ports

Perpetuating the status quo? Regulation by consent?



Pricing

1. BFP (Import Parity): Needs regular review. Watch Arab Gulf.
2. Regulatory Accounting System (RAS): (not in public domain – Why?)
3. RAS margins 2000-2020: 114% Real increase
4. Return on assets (ROA) is 27.5%
5. Return on equity (ROE) is 23%
6. WACC 2.6% per cent higher than it should be due to methodological errors (8.6cpl)
7. Gearing:

	Debt	Equity
DoE	20%	80%
Normal	70%	30%

8. Entrepreneurial remuneration: (see above) Double counting. Remuneration not consistent with small business assumption.
9. Other Operating Costs: 6.4 cpl higher than should be
10. Staffing costs: No reliable data. Estimate 20-30 cpl higher than needed

Are policy's intended outcome achieved?

POLICY	OUTCOME
Deregulation and competition	• Not achieved. Failed orderly transition after 22 years
'affordable prices' / market related pricing	• Not achieved
ISI	• Not achieved. Net imports from 2006 (assumption that promoting refining is welfare-enhancing -security of supply- no cost-benefit analysis to support this) • No refinery capacity added • No refineries closed
Industry profitability	• Yes – too well • Investment in storage and loading facilities, Vittol, Oiltanking. Glencore (purchased Chevron), Puma Energy. • Proliferation of service stations
BEE	• Substantial progress (at what cost?) • Shifting goalposts • Lack of credible data
Small business promotion	• Yes – too well - proliferation of service stations
Jobs	• Yes but no reliable data. Subsidised therefore unsustainable.

[A] Is regulation still appropriate given:

- Changed market circumstances?
- Economic needs?
- Outdated regulatory model + poor quality of regulation?
- Compelling case for electric vehicles (ISI par excellence)

[B] What is the appropriate policy approach?

In the pursuit of welfare, there is a policy trade-off between the economic benefit from fuel intermediate inputs at market-related prices on the one hand and, on the other hand, the benefits flowing from industrial and social policy interventions.

Wits Business School

Thank you

AFRICAN ENERGY LEADERSHIP CENTRE

First of its kind in South Africa and on the continent