

Price setting in the ports, rail and electricity sectors: Government choices and the contribution to employment and growth

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Background

- Commitment to improving competitiveness of regulated industries & administered prices(GDS, EE cluster PoA)
- Why important?
 - Asgisa targets to expand non-resource based exports, improve economic efficiency, promote growth & job creation, keep inflation low
 - Critical enabler of investment and economic activity that drive growth and employment creation
- Strong stated commitment not translating into high paced improvements
 - Link to economic growth understood
 - Link to employment objectives do not appear to be well understood

Findings from complement of 3 HSRC projects

Project 1

The HSRC prepared a review of the potential economic impact of achieving competitive commercial transport & telecoms in 2005/6. This involved:

- Sector studies to identify the competitiveness gap in terms of price and productivity
- Economy-wide modelling

Project 2

- Nedlac commissioned research in Sept 2006 on administered pricing in ports, rail and water services, completed in 2008
- Review of price setting mechanisms, incl description of market structure, institutional and regulatory frameworks
- The economic & social objectives of admin pricing as compared to the actual mandate of price setters
- Benchmarking prices and quality against key competitors internationally

Project 3

- Presidency through TIPS/Commark funded project to look at the economic impact of electricity cuts on the SA economy.
- The project looked at the economic impact of differently distributed pricing or rationing options aimed at reducing peak electricity usage and electricity consumption.
 - economy-wide impact of a reduction in electricity use of up to 10%, differently distributed across the main economic sectors and users.
 - the potential for short- and medium-term improvements in energy use by large consumers.
- The study also considers the potential impact of different pricing proposals on Eskom itself

Papers available (or soon...)

- Altman, M. et al. 2008. Administered prices study on economic inputs: executive summary
- Genesis Analytics. 2008. Prices, investment and efficiency on the railways.
- Goode, R. 2008. Administered pricing in the ports sector.
- Muller, M. 2008. Administered pricing in the water sector.
- Altman, M. et al. 2008. The impact of electricity price increases and rationing on the South African economy.
- Davies, R. and van Seventer, D. 2006. The economy-wide effects of price reducing reforms in infrastructure services in South Africa
- Botes, FJ. 2007. Impact of Transport Pricing practices in South Africa on Freight Transport Costs

www.hsrc.ac.za/cpeg.phtml

<http://www.hsrc.ac.za/CCUP-64.phtml>

Link between infrastructure, employment and growth

- Infrastructure is necessary (although not sufficient) for promotion of exports
- Traditional infrastructure networks focused on traditional tradables such as mining and minerals, and now motors.
- General infrastructure critical for promotion of new non-traditional activities that are main govt target and essential for expansion of 'good jobs' sectors
- Especially important where difficulty influencing competitiveness through the exchange rate
- One way of reducing economy-wide prices and raising productivity

Some critical choices

- Market structure and/or performance incentives that lead to social objective
- Approach to cost recovery in period of major investment programme
- Approach to operational improvements & capital spending – pace, scale and type

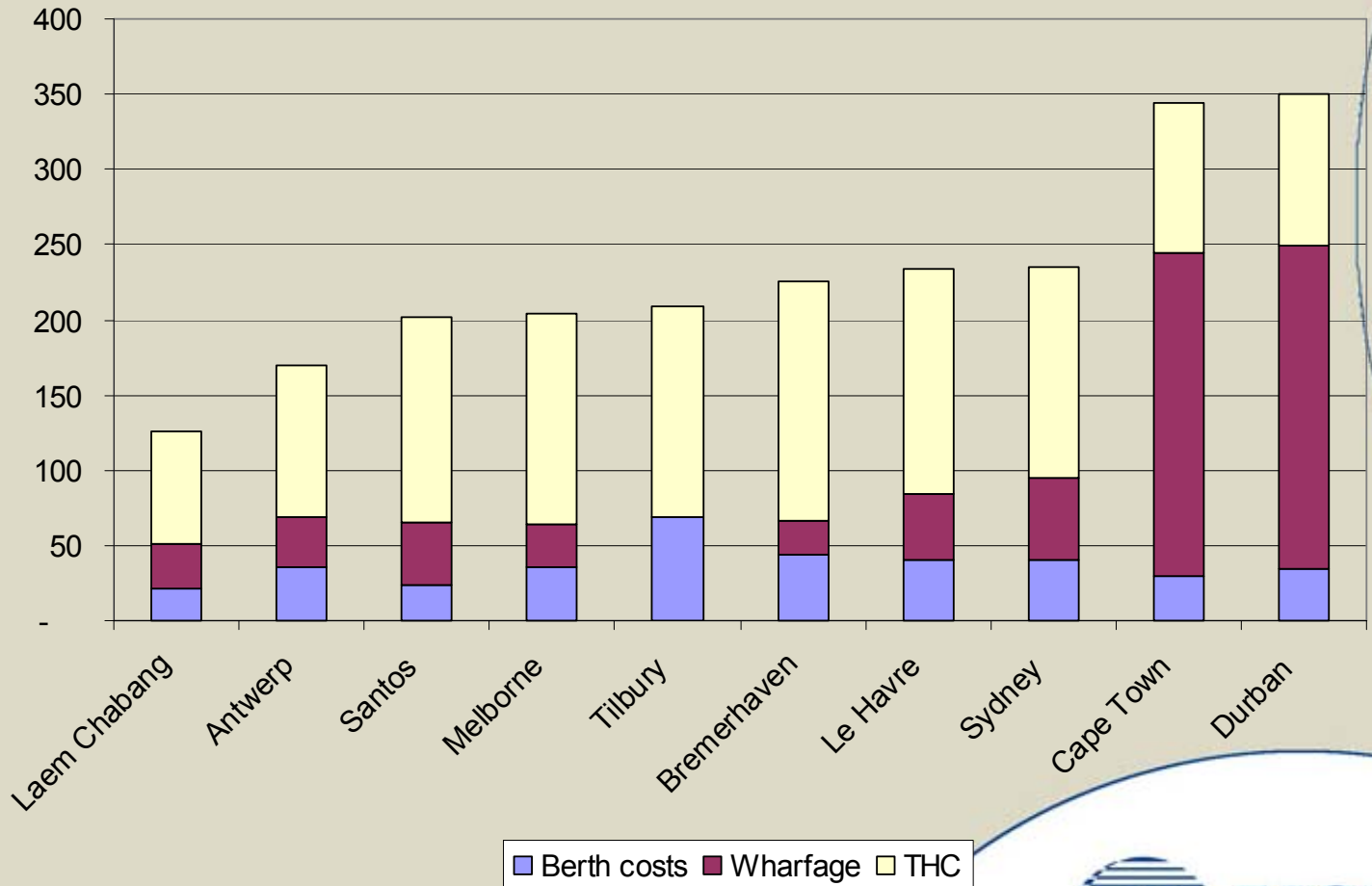
Commercial transport & telecoms

- Key problem = alignment and efficiency in supporting growth industries
- Impact of closing price & quality gap in commercial transport & telecoms in SA in 2003 (see Davies & v Seventer)

Competitiveness gap

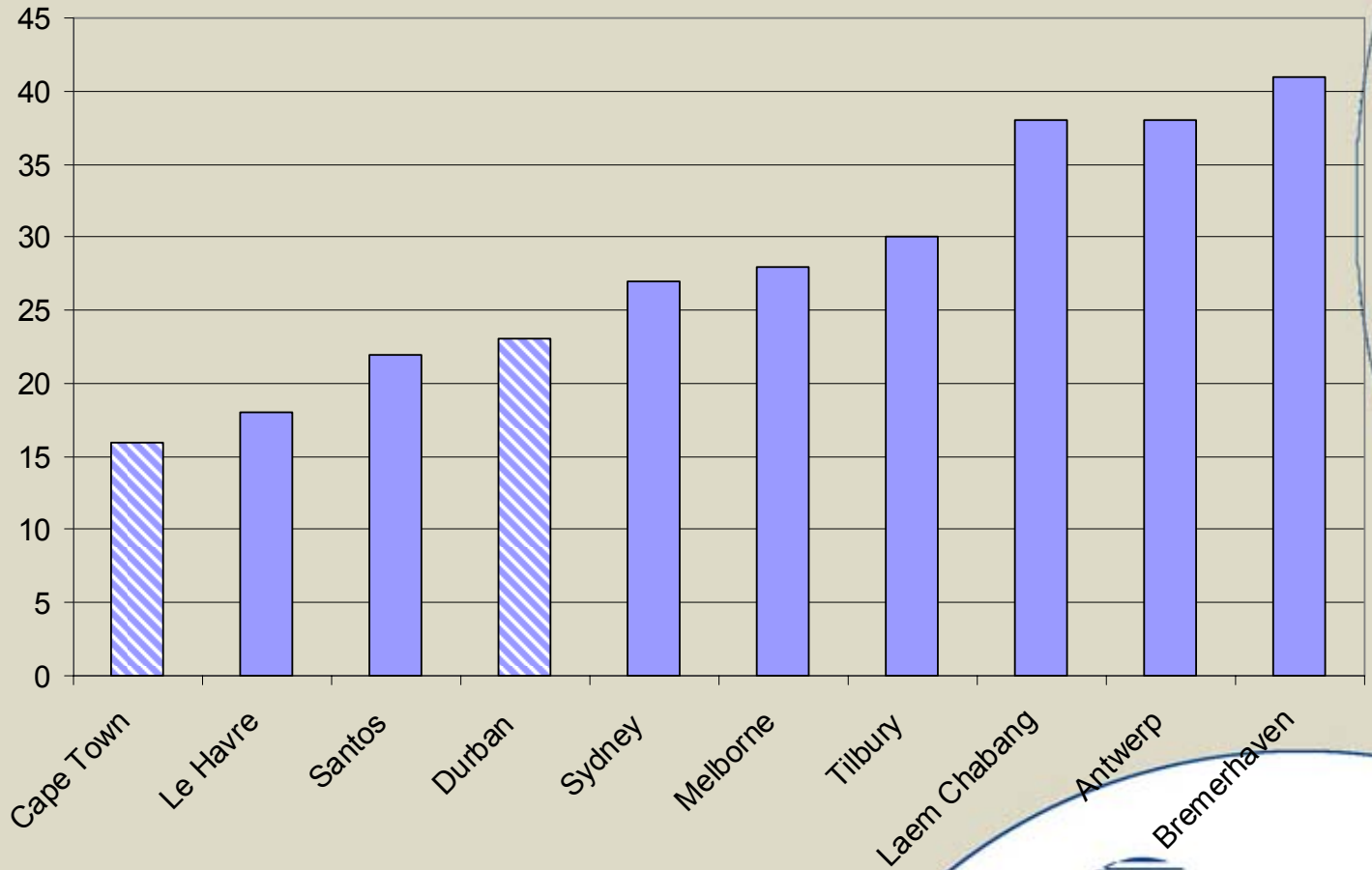
- Davies et al estimate mark-ups from imperfect competition and import protection of 45% for freight transport and 35% for telecommunications (based on studies by Botes, Edwards, van de Winkel, etc)
- Rail competitiveness gap (see Truen) =
 - Non-traditional exports need General Freight (GFB)
 - Current approach continues to favour commodity exports
 - Prices do not promote volume maximisation, so costs are too high
 - Prices favour low elasticity customers, and encourage shift to road.
 - Pricing at high end of comparator group, although seen as competitive
 - On-time behaviour very poor
- Ports competitiveness gap (see Goode) =
 - SA has moved from mid-price to upper quartile of port costs, relative trading partners (excl NAmerica)
 - Port productivity variable, influenced by breakdowns, effects of investment not yet felt, equipment in but not working (Low productivity *not* caused by equipment scarcity)
 - Cargo dues are used as a “strategic pricing instrument” for the wider transport group structure, diverting income from ports. Set to meet revenue target, versus to cover costs.

Comparative ports costs



Social science that makes a difference

Crane productivity



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Break Bulk Performance

Richards Bay Multi Purpose		Maputo Multi Purpose	
Norm	Average	Norm	Average
150 t/ph	120 t/ph	170 t/ph	190 t/ph

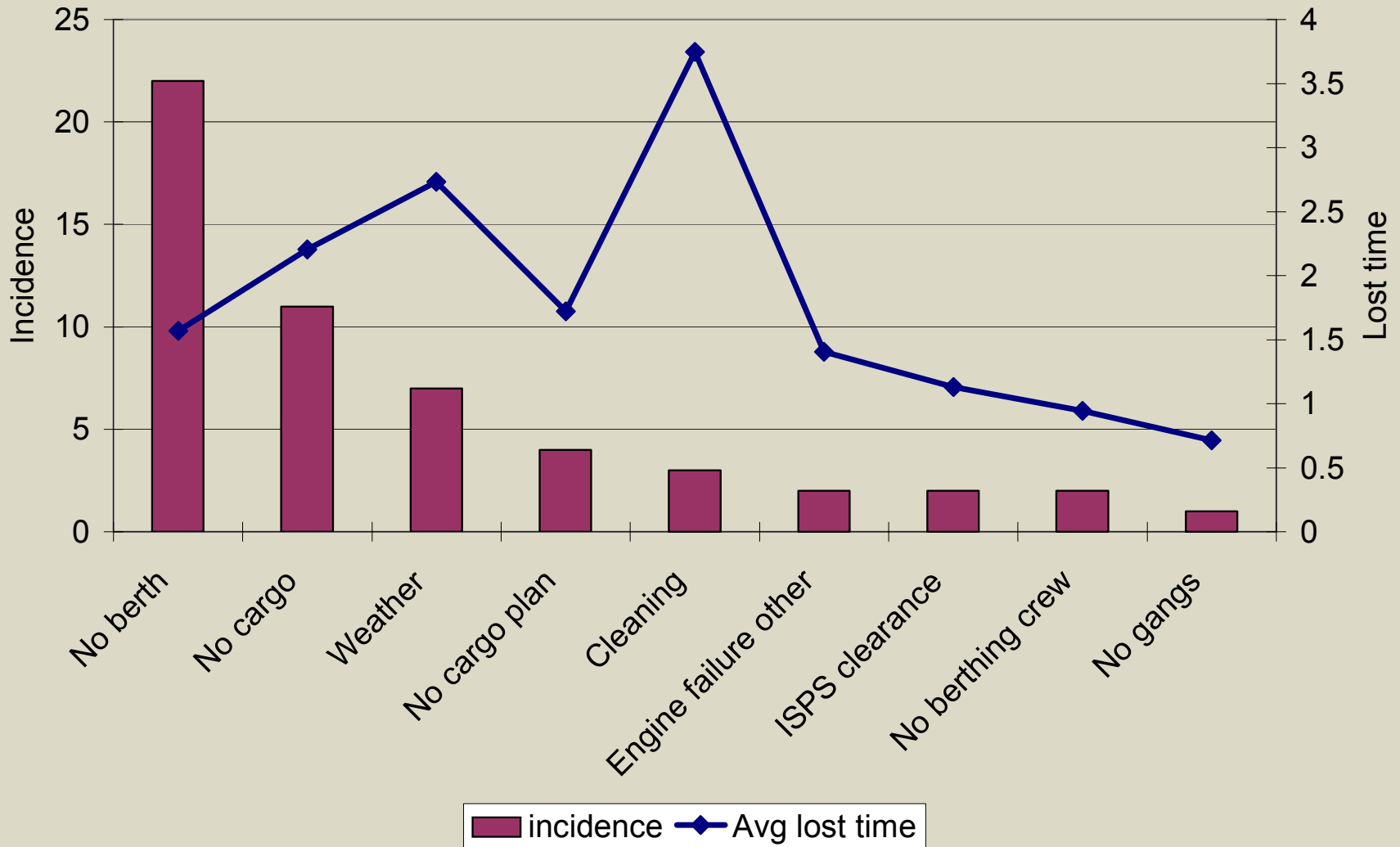
- Marine service delays, slow loading, breakdowns extends port call
- 4 day port call extends to n^2 days shipping line incurs costs
- Impacts feed through to reduced commodity exports, lost orders

Comparative Car Terminal Productivity

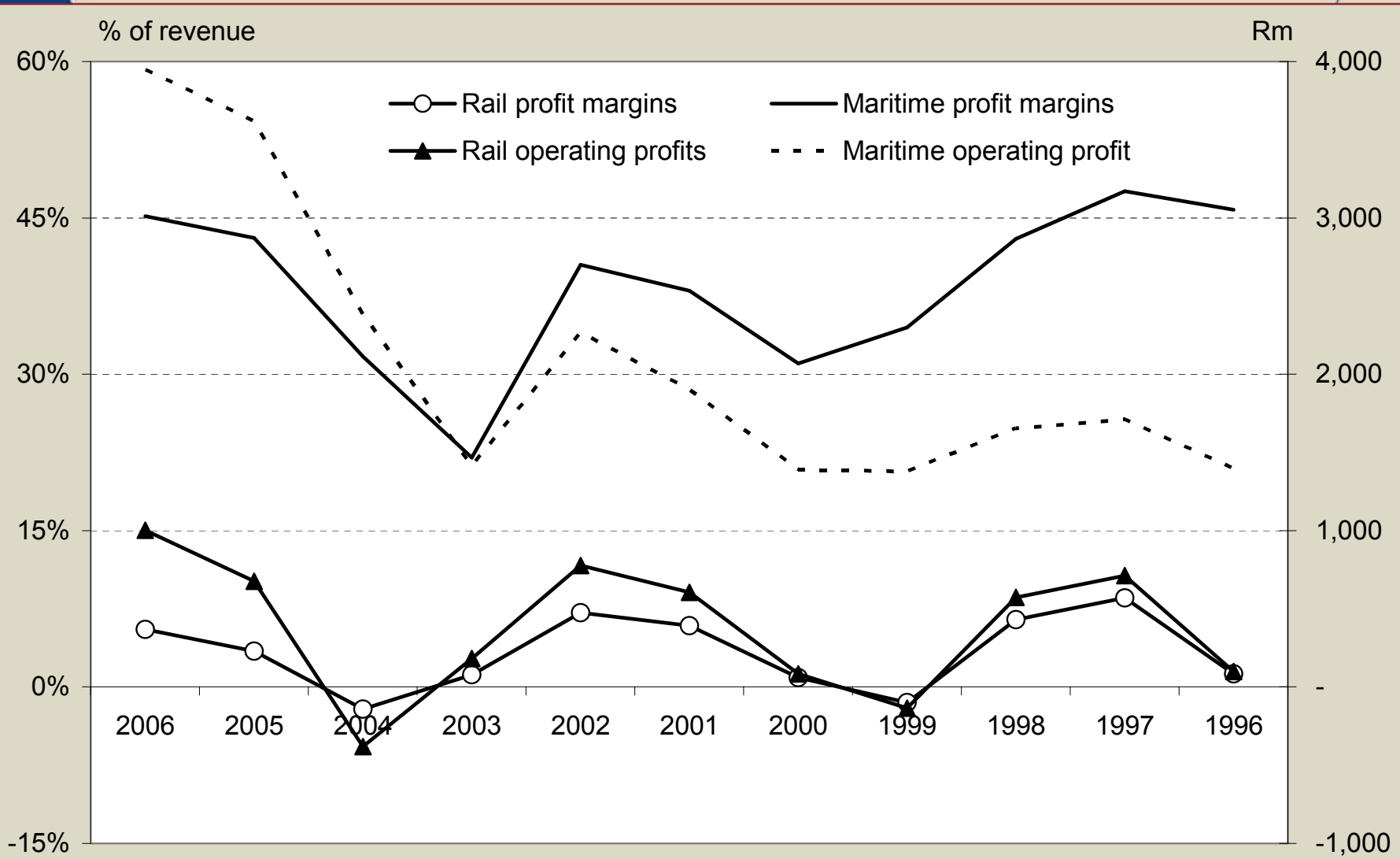
Port	POB to Berth	Set up	Loading rate	Wait for POB	Total Time
Taichung	0.8	0.6	2.5	0.8	2.2
Bremerhaven	1.3	0.5	1.7	0.8	2.6
Le Havre	1.2	0.7	1.3	0.8	2.7
Antwerp	1.2	0.8	1.7	1.0	3.0
Singapore	2.0	0.0	1.0	1.0	3.0
Port Elizabeth	1.0	1.3	1.7	1.4	3.7
Yokohama	2.5	0.5	1.4	1.0	4.0
Chiba	3.0	0.5	2.9	1.0	4.5
Toyohashi	3.0	0.5	2.9	1.0	4.5
Nagoya	3.5	0.5	1.4	1.0	5.0
Durban	1.3	1.4	1.7	4.0	6.6

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Vessel Delay Factors



Marine and Rail Financial Performance



Economic impact if transport & telecoms competitiveness gap closed

- GDP would have been 3.9% higher in 2003
- Employment would have been 5.5% higher (440,000 jobs – would have reduced UE to about 20%)
- Limitations
 - Note multiplier effect continues into following years. This reflects once-off improvement
 - Assumes perfect response by private sector, no capacity constraints etc.
 - Underestimates possible spin-offs, new activities that might arise, etc

Electricity

- Electricity problem is different: low pricing and slow investment decisions have resulted in shortages and high bulky cost of investment
- Now left with the following decisions:
 - What sort of build programme?
 - How to pay for very large build programme?
 - How to distribute supply when shortages arise?
- **Mining, smelters or manufacturing.... See 3 scenarios in Davies**
- We model the impact of introducing a sudden 72% or a 27% price increase.
 - While this is not precisely that being considered, it does give a sense of the economic impact.
 - The effects of this are not proportionate.
 - A 72% price increase would lead to 2.5% rise in inflation, a fall in GDP by 0.3% (or about R 67 bn) and a reduction in low skill employment by 1.4% (about 55,000 jobs).
 - If the electricity price increases by 27%, inflation rises by 0.9%, GDP falls by 0.1% and low skill jobs shrink by 0.3%.

Overall findings & implications

- Tracking admin prices
- Setting performance targets
- Approach to cost recovery
- Price setting behaviour
- Institutional context

Tracking admin prices

- Information on network industries is extremely opaque: Pricing, technology, operational strategy
- Strong monopoly behaviour
- Treasury/Stats SA has made good progress in tracking administered consumer prices
 - ...but **No** progress in tracking administered producer prices
- Urgently need to establish rules & norms for information disclosure, especially on prices and operational costs
- Should not unnecessarily impose burden on SoE
- Benefit of benchmarking to enable comparison
 - SoEs repeatedly respond that conditions are unique
 - However benchmarking that is publicly available is essential

Setting performance targets

- Need to be better aligned to “Asgisa” objectives – ie diversifying industrial base
- Primary target should be competitive price and quality
- double mandates = making profits & meeting social goals?
- Opaque information enables “strategic” pricing

Transnet Shareholder Compact 2006

Performance area	KPI/Measure	Benchmark	2005/06 baseline	2006/07 target	Tariff %	Volume %
Capital/ financial efficiency	EBITDA margin	Over 35%	40.2%	34.8%	Spoornet	
	Cash interest cover	> 5 x	3.7 x	5.3 x	3.1	10.9
	Gearing ratio	40-50%	47.1%	47.9%	NPA	
	Cash flow return on investment	Over 6%	5.8%	5.8%	2.9	3.9
Infra- structure investments	% actual capex to budget	Over 90%	R6 601m	R11 847m	SAPO	
	% actual maint. to budget: Spoornet	Over 90%	R1 906m	R3 890m	3.7	8.8

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Eskom performance targets

Key performance area	Key performance indicator	Unit of measure	Target 2008	Actual 2008	Actual 2007	Exceeded/not achieved
Capital and financial efficiency	Return on average capital employed (ROACE)	Budget (%)	≥ 6,1	5,4	9,7	not achieved
	Earnings before interest and tax margin (EBIT)	Budget (%)	≥ 11,5	9,2	16,9	not achieved
Capital expansion (infra and capital expend)	Generation capital expenditure	Budget (Rm)	≥ 9 940	11 004	7 056	exceeded
	Transmission capital expenditure	Budget (Rm)	≥ 2 171	2 394	1 170	exceeded
	Generation technical plan expenditure (investment in existing infrastructure)	Budget (Rm)	≥ 3 703	3 461	2 942	not achieved
	Distribution capital expenditure	(Rm)	≥ 3 476	3 886	3 430	exceeded
	Generation capacity installed and commissioned	Plan (MW)	≥ 1 041	1 061	1 360	exceeded
	Transmission lines installed	Plan (km)	≥ 270	246	430	not achieved
	Transmission MVA installed	Plan (MVA)	≥ 295	1 295	1 000	exceeded
Operating efficiency & effectiveness	Major incidents (transmission system minutes lost)	Plan	≤ 1	6	2	not achieved
	severity degree one (≥ 1, but less than 10 minutes)		≤ 1	5	1	
	severity degree two (≥ 10, but less than 100 minutes)		0	0	1	
	severity degree three (≥ 100 minutes)		0	1	0	
	Transmission system minutes lost (<1)	Plan (SML)	≤ 3,9	3,56	3,67	exceeded
	Generation unplanned capability loss factor (UCLF)	Plan (%)	≤ 4,2v	5,13	4,34	not achieved
	Distribution system average interruption duration index (SAIDI)	Plan	≤ 42,3	73,7	51,40	not achieved
	Distribution system average interruption frequency index (SAIFI)	Plan	≤ 22,8	33,72	25,20	not achieved
	Rand/megawatt hour (before embedded derivatives)	Budget	≤ 183,00	189,25	160,90	not achieved

Eskom's stated financial objectives

- Eskom recently requested 53% price increase intended to cover rises in primary energy costs, build programme, and DSM
- The idea was that unexpected costs would create uncertainty and lower its credit rating, esp in context of blackouts
- The Eskom CFO says target to ensure that Eskom's credit rating is:
 - max debt/equity ratio of 200%
 - interest cover above 3.0.
- This expectation is above or equal to what might be required by public listed company

Approach to cost recovery vs direct state investment

- Particularly important in context of major investment programmes for services that have major economy-wide implications esp in relation to expansion of new tradables
- Possibilities
 - Distributed through different users
 - Capital raising – locally or internationally
 - Direct shareholder injection by the state

Price setting behaviour

- **What are the aims of pricing?**
 - Eg efficiency, meet revenue targets, cover capital investment requirements, managerial incentives?
- **Cross subsidies**
 - Who decides and why?
 - Relative merits of cross-subsidy from delivery agent versus fiscus?
- **Extent of discretion of SOE**

Institutional framework

- SOE has dominant position in each sector and it shows in pricing, operations, and poor information exchange
- Not only monopoly, but state owned monopoly, governed by administered pricing and regulation, with no potential for 'creative destruction' unless by decision of the state.
- Information available on high level financials. Operational information is opaque
- Multiple state departments, often competitive with limited oversight capability relative to that of SOE
 - DPE = shareholder
 - DME, DoT = policy
 - Treasury = decisions on state funding and capital raising
 - Regulators = Nersa, Icasa, Ports authority (and sometimes multiple regulators)