SAASOA

Rethinking the Ports Regulatos' Core Methodology

Rethinking the Ports Regulators Core Methodology

- The key objective in regulating a monopoly
- Problems with the present approach
- The benefits of a price capping approach

SAASOA

SAASOA is the SOUTH AFRICAN ASSOCIATION OF SHIP OPERATORS AND AGENTS.

Its members are among the major consumers of the Ports Authority's services.

Regulating a Monopoly

Economics emphasises the advantages of perfect competition.

In a market environment, where there is perfect competition, the welfare of consumers is maximised in equilibrium, at a point where the ruling price of the product is equal to the marginal cost of the product (the cost of producing one additional unit).

Put another way, the difference between what consumers are prepared to pay for the quantity of goods sold in the market and what they actually pay is maximised.

This difference is known as CONSUMER SURPLUS.

Regulating a Monopoly

A monopoly is focused on profit maximisation.

It maximises profit at the point where the gain in additional revenue from producing and selling one more unit of output (marginal revenue) equals the cost of producing that additional unit.

At any given level of output, because market demand decreases with price and vice versa, marginal revenue will be less than average revenue or price.

Formally: $MR = d(PQ)/dQ = P + Q(dP/dQ) < P$, because $dP / dQ < 0$

Regulating a Monopoly

As MR < P, and cost increases in output level, an unregulated monopoly will always produce less than would be produced under perfect competition and at a higher price.

This reduces consumer surplus, because consumers cannot purchase as much output as they would under perfect competition (it is simply not made available) and they pay a higher price.

Regulating a Monopoly

In an ideal world, where it had perfect knowledge of all the relevant facts, a regulator could simply instruct the monopoly to produce the perfect competition level of output.

However, the Ports Regulator does not have perfect knowledge of all the relevant facts.

Thus it must regulate according to a different criterion or criteria.

The Ports Regulator's Criteria

The Port Regulator regulates according to two main criteria.

The "hard" criterion, on which the Regulatory Manual is focused, is that the Ports Authority is barred from earning monopoly profits. It is only entitled to earn sufficient revenue to cover its costs; that is, its tariffs are limited to the amount necessary to earn the Revenue Requirement.

This is a form of rate of return regulation.

If the Authority earns less or more than the Revenue Requirement, then a clawback mechanism ensures that future tariffs are adjusted either to recover loss or more importantly disgorge any economic profit inadvertently made.

The Ports Regulator's Criteria

The "soft" criterion is that there are long term targeted tariff levels – long-term base tariff rates to which the tariff book is expected to converge.

For example, these were reported in the 2016/17 record of decision.

This criterion is aimed more at eliminating cross-subsidisation in the tariff book than in setting a cap on future tariffs. It is a soft criterion because the base tariff rates are adjusted each year.

The Consumer's Perspective on Regulation

With the utmost respect to the Regulator, it is utterly irrelevant to consumers whether the Ports Authority earns a monopoly profit in any given year.

What matters is how the Ports Authority earns that profit.

In a world of imperfect information, there really can be only one criterion for monopoly regulation in favour of consumers – the Regulator must regulate so as to increase consumer surplus by as much as is feasible in each regulatory period.

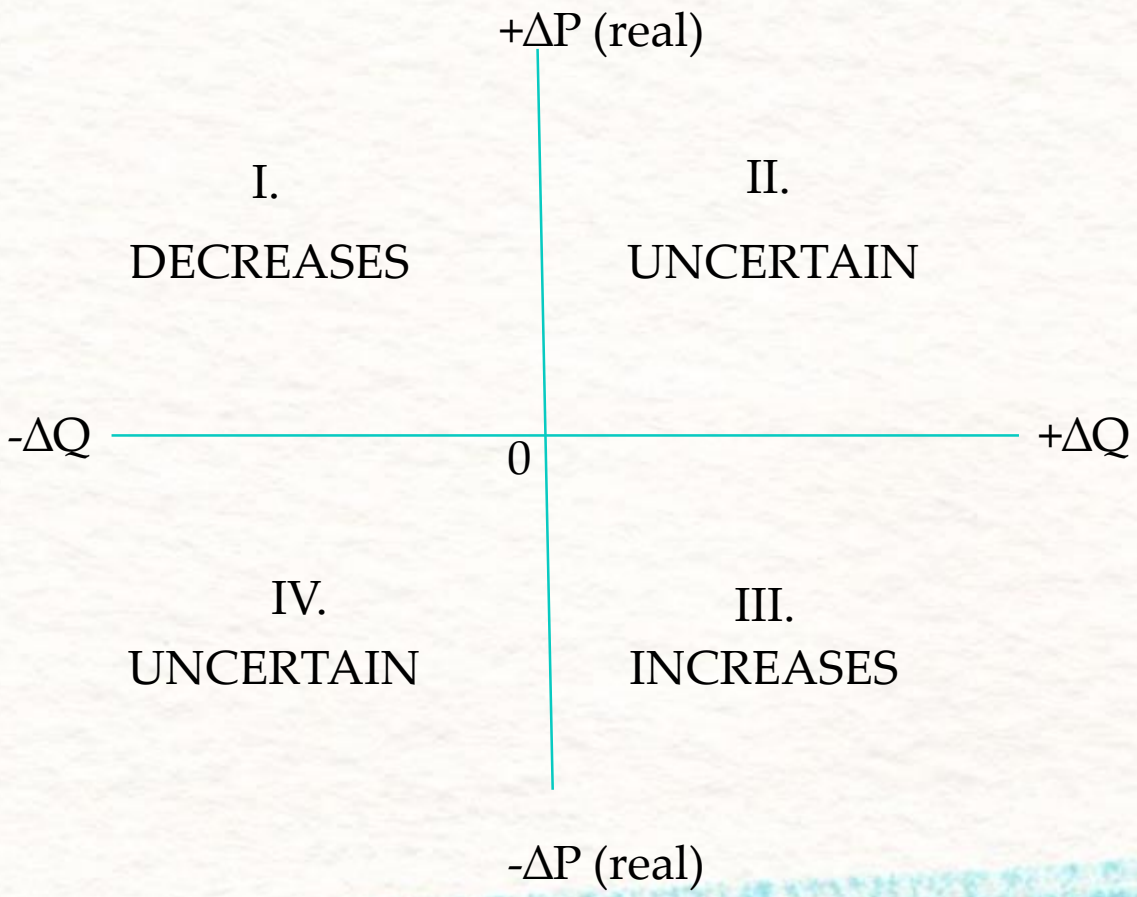
Increasing Consumer Surplus

How can Consumer Surplus be increased?

The only certain way of ensuring that consumer surplus will increase in each regulatory period is to adopt a regulatory regime that ensures that one of the following occurs:

- Prices remain unchanged in real terms, while the quantity of goods or services supplied increases
- Prices fall in real terms, and the same quantity of goods or services is supplied; or
- Best of all, prices fall in real terms and the the quantity of goods or services supplied increases.

Increasing Consumer Surplus



Increasing Consumer Surplus

Any outcome of regulation in Quadrant I is an abject failure.

Outcomes in Quadrants II and IV may or may not increase consumer surplus.

Outcomes in Quadrant III always increase consumer surplus.
There can be no doubt that outcomes in this quadrant represent successful regulation.

How has the Regulator done?

Prior RODs:

Year	% Tariff change (real)	% Volume increase
2013/14	-5.4%	5.87%
2014/15	0%	5.5%
2015/16	0%	4.8%
2016/17	-6.6%	1.7%

How has the Regulator done?

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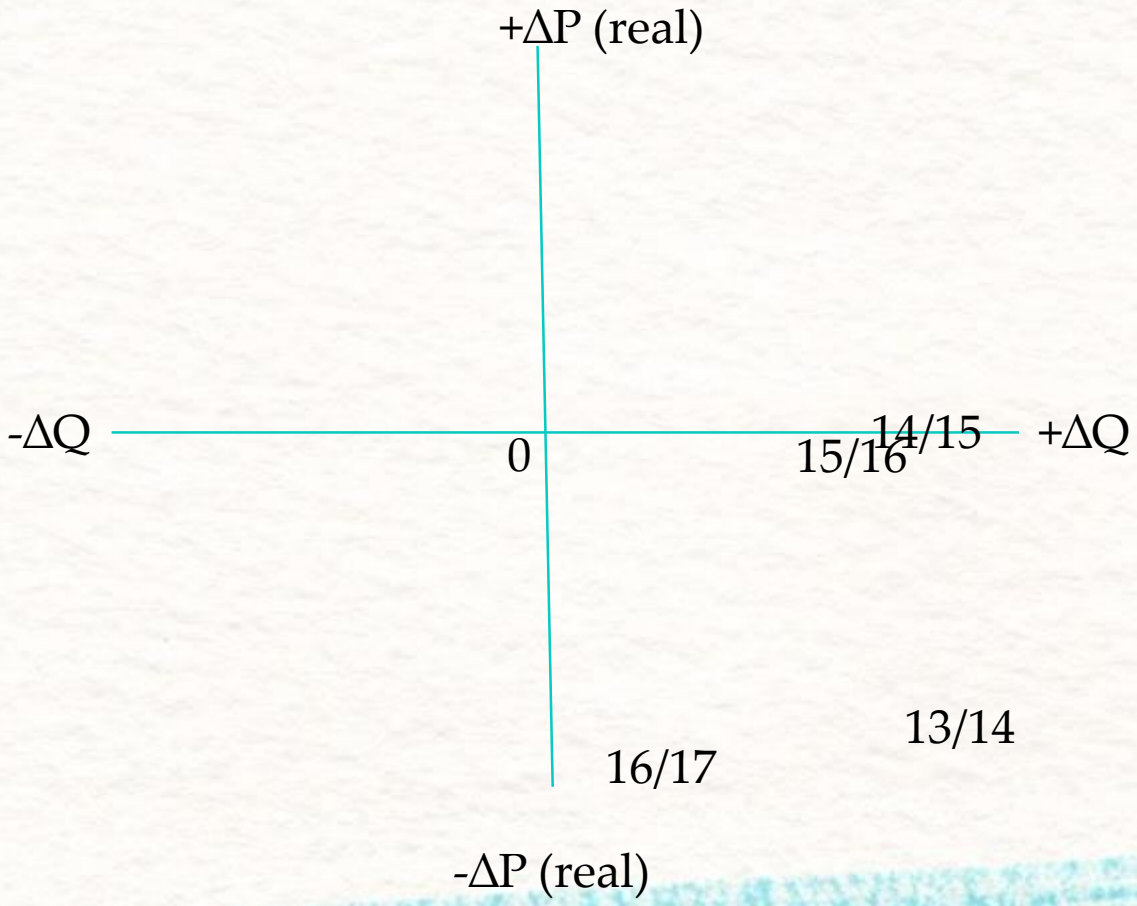

How has the Regulator done?

The answer is that the Regulator has done pretty well in increasing consumer surplus.

So why rethink the methodology?

Problems with the present approach

Rate of Return Regulation

Rate of return regulation aims at ensuring that a monopoly is able to earn sufficient revenue to cover its economic costs, but no more. The goal is to ensure that the monopoly does not earn an economic or supernormal profit.

Problems with the present approach

Price Capping Regulation

Under the price capping method, a monopoly's prices are limited to a specific rate of increase, typically entailing a specific percentage reduction in real terms.

Under the price capping approach, the monopoly is limited in the use of its pricing power.

However, subject to the price constraints imposed by the price cap, the monopoly is free to make an economic profit i.e. to earn more than the cost of capital.

This can be done by increasing the quantity of services delivered at lower real prices as well as by reducing costs.

At the same time, the monopoly is not guaranteed the recovery of its costs.

Problems with the present approach:

Categorising the present methodology

The present methodology entails determining the Authorty's revenue requirement in order to set a price cap.

However, the methodology is not a true price capping approach, because unexpected losses or profits are clawed back. That is, the revenue requirement becomes a binding constraint, with the result that the methodology, though superficially similar to price capping approach, is better described as a strict rate-of-return approach.

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Problems with the present approach:

Problems with Rate of Return Approach

The main problem with the rate of return approach, as implemented by the Regulator is does that it does not penalise poor business decisions by the Authority, and nor does it reward good decisions.

If the Authority overinvests in capital (i.e. increases the RAB more than is necessary), prices are adjusted upwards to ensure that it recovers the increased cost of capital.

By contrast, if the Authority utilises a smaller capital base more efficiently, it is still not permitted to earn more than the cost of capital – the difference will be clawed back.

If the Authority allows operating costs to increase due to inefficiencies, prices are adjusted upwards to ensure that these costs are covered.

If the Authority increases operating efficiency and reduces operating costs, it cannot profit thereby – Its revenue target will be lowered.

Problems with the present approach:

Problems with Rate of Return Approach

The management of the Authority therefore have no incentive to utilise capital more efficiently nor to reduce operating costs.

In fact, bearing in mind that the rate of return regulation only precludes earning a profit that exceeds the cost of capital, the management of the Authority have a strong incentive to increase the accounting profit – the RETURN ON CAPITAL - by the only method available

→ INCREASE THE SIZE OF THE RAB, irrespective of whether it anticipates a significant increase in output.

Problems with the present approach:

Problems with the Rate of Return approach

This is demonstrated by the 2017/18 tariff application.

The Authority wants to increase the RAB from R74 477m in 2017/18 to R81 651m in 2018/19 and R89 872m in 2019/20. Only about half these increases are due to inflation indexing of the RAB.

This results in a projected increase in Return on Capital (i.e. Accounting Profit) from R4 036m in 2017/18 to R5 101m in 2018/19 and R5 817m in 2019/20.

The Benefits of Price Capping:

Price Capping creates the correct incentives

Subject to the price constraints, the regulated monopoly can earn and retain as much profit as it can. That is, it can earn and keep a rate of return higher than the cost of capital.

It can increase its profits and rate of return by:

(1) Selling / delivering more output at lower prices
(2) Using its fixed capital more intensively
(3) Reducing other operating costs

Reductions in cost open up the possibility of further price reductions, and depending on the sensitivity of demand to price, increased output at lower prices.

ALL OF THIS TENDS TO INCREASE CONSUMER SURPLUS

The Benefits of Price Capping:

Price Capping creates the correct incentives

In fact, depending on the size of the market and the extent to which it can reduce its costs, the regulated monopoly may have an incentive to lower prices beyond the price constraint if demand is sufficiently elastic and it can produce the required output.

Moreover, the management of the monopoly, if their compensation is linked to profitability, have an incentive to reduce costs, increase output and lower prices further, because the monopoly keeps the profit.

Ironically, short-termist thinking among managers facing such an incentive scheme would have a benefit in that the monopoly would be focused on maximising short-term profits and would be less inclined to underperform with a view to avoiding progressively more severe price caps in the future.

The Benefits of Price Capping:

Price Capping improves information problems

Under the Revenue Requirement approach, the Regulator has to rely on information which it is able to observe directly and on information which it obtains from the Authority.

Necessarily, some information is difficult to observe, some information is difficult for the Authority to communicate meaningfully, and judging from some of the comments expressed by the Regulator, insufficient information is communicated by the Authority (i.e. some information is not revealed).

Under price capping, the Authority is free to use all the information at its disposal to optimise production and marketing subject to the price constraint, instead of the Regulator having to determine, on the more limited information available to it, the annual revenue requirement.

The Benefits of Price Capping:

Price Capping can be complex or simple

Price Capping can follow either a potentially sophisticated rule approach or a straightforward constraint on price levels, by prescribing a percentage decrease in real price levels.

For an example of the rule approach, see Vogelsang and Finsinger (1979) and the discussion thereof In SAASOA's submissions.

The simple approach is widely used in the United Kingdom and other countries under the name RPI – X, where RPI stands for retail price index (i.e. CPI in South Africa) and X is an offset. Typically, X is set such that X > RPI, and the real price level decreases.

The Benefits of Price Capping:

It would be easy for the Regulator to implement

The Regulator already presents its decisions in a form similar to RPI –X price capping.

Furthermore, although it determines tariff decisions with reference to the Revenue Requirement, the Regulator effectively has imposed price caps. It is apparent that these price caps have not proved overly onerous for the Ports Authority.

However, by also capping the rate of return using the clawback mechanism, the Regulator has removed incentives for the Authority to do better and further increase consumer surplus.

Moreover, it would not entail jettisoning the Revenue Requirement methodology; the methodology would remain a valuable tool in analysing the Authority's performance ex post facto, with a view to determining future price caps.

The Benefits of Price Capping:

It could merge the hard and soft constraints

The Regulator has identified long term tariff targets. However, these are not directly enforced, because of the use of the Revenue Requirement approach.

By expressly setting price caps over a sequence of years that ensure that the long term tariff targets are achieved, the Regulator can turn this soft constraint into a hard constraint.

The Benefits of Price Capping:

SUMMARY:

From the perspective of consumers of the Ports Authority's services, what matters is not limiting its potential to earn monopoly profits but rather ensuring that consumer surplus is increased.

The present Revenue Requirement approach has yielded decisions that are similar in form to price caps.

However, although these tariff decisions have forced the Authority to increase consumer surplus, they have not created incentives for the Authority to take actions that increase consumer surplus of its own volition.

A genuine price capping approach will create these incentives and will not be difficult to implement, given similarities with the present regulatory scheme.

The Benefits of Price Capping:

Accordingly, SAASOA recommends that the Regulator give serious consideration to switching to a price capping approach.