

# Regulatory and consumer issues in downstream petroleum industry

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# Public policy in downstream petroleum

- Reform and regulation are not ends; they are **means to an end**
- **The end is good sector performance**, defined as
  - Availability where citizens/industry located (100% is optimal)
  - Price (lower the better)
  - Quality of service (high is good; in the context of price-quality bundle)
  - Choice (not one-size-fits-all, but allowing customers to choose elements that fit them)

# Historically . . .

- Infrastructure services were not supplied by governments
- Were first supplied by private entrepreneurs
  - Who were then subjected to various forms of controls
  - And were then “nationalized”
    - Except in the US, Canada, the Philippines, Latin America, and a few other places
- Starting in 1980s, remedies sought for weaknesses of integrated government-owned monopolies

# Current thinking on how infrastructure services should be supplied

- Markets
  - But subject to varying degrees of market failure
- Appropriate response?
  - Use non-market mechanisms: Government supplies directly

OR

- Remedy specific market failures with targeted solutions that will hopefully not exacerbate other problems

# Remedies for market failure

- Concession contracts and/or formulae that can be enforced without a specialized regulatory agency

OR

- Ex-ante, sector-specific regulation which requires a specialized agency to exercise discretion

Third option

- Hybrid form that relies on formulae etc. to reduce demands on regulatory agency and also reduce regulatory risk

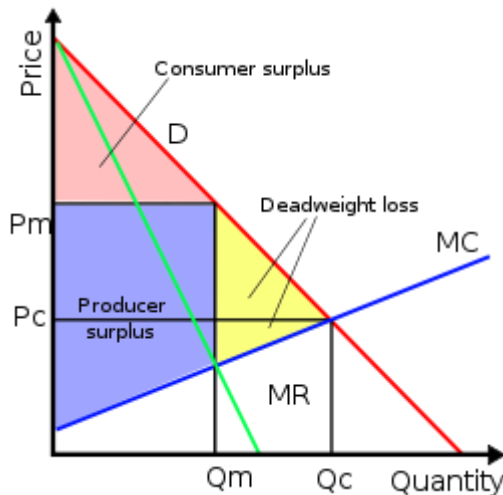
# **PROBLEMS THAT REGULATION CAN SOLVE IN THE SRI LANKAN CONTEXT**

# Petroleum markets in Sri Lanka

- Petroleum distribution is a duopoly since 2002, but
  - No price competition, with retail prices set by government
  - New fuel distribution outlets require concurrence of existing suppliers (hopefully changed since 2003)
- LPG distribution is also a duopoly
  - Significant increase in use of cooking gas to 18.6% of households (from 10.8% in 1996-97 at time of privatization); but 78.1% still use firewood
- Lubricants market has more suppliers, but requires licenses to enter

# Problem: How to prevent mistreatment of consumers by distribution companies?

## Theory



## Outcomes

- Monopolists undersupply ( $Q_m < Q_c$ ) & overprice ( $P_m > P_c$ )
- Customers as well as society lose
- Monopolists also have no natural incentive to be responsive to customer concerns



# Solution to monopoly problems: Compel universal connectivity & regulate price

- Government can permit competition to the extent possible  
OR
- Government, acting as agent of the public, can order oligopolistic suppliers to supply to all
  - If demonstrated that distribution to some areas/customers uneconomical, can offer subsidies OR mandate cross subsidies
- Government can set price
- Secondary problem: low prices can result in low coverage and/or poor quality
- Solution: set price at cost + reasonable return

# Government price regulation

- Tends to veer toward unreasonably low prices in democracies → discos unable to plan investments
- Ministry of Finance becomes de facto regulator
  - Source of investment funds /loan forgiveness
  - Price setting subject to budget requirements; not usually based on cost
- Solutions:
  - Specialized price regulation through PUCSL (but MoF does not always step back)
  - Formula (very small role for PUCSL)

# Formula-based regulation

- Singapore FOB Price in USD/bbl
- + Freight/loss/insurance in US \$/bbl
- = CIF Price in US \$/bbl
- x Currency Exchange Rate (Rupees per US Dollar)/litres per bbl (158.99)
- = CIF Price in Rupees/litre (rs/litre)
- + Jetty Pipeline (US\$ 3/ton)
- + Stamp Duty (1.2% of CIF incl. bank commission)
- = Landed Cost (a surrogate ex-refinery price) in Rs/litre
- + Customs Duty if appropriate
- + GST (12.5% of CIF +CD + Excise)
- + NSL (6.5% of (CIF+CD) x1.25
- + Excise Duty (where applicable)
- = Tax paid landed cost
- + CPC Finance Charges (fixed amount of 1.75 Rs/l on gasoline and diesel)
- + CPC wholesale costs
- + CPC margin
- = Whole price

# Formula without regulatory agency?

- However much one tries, language and terms are inherently ambiguous
  - Someone may have to interpret things such as
    - Validity of elements/periods
    - Exchange rates
- Conditions change
  - Someone has to deal with change
- When formulae are applied without a regulatory agency, a de facto regulator fills the vacuum

# Problems with cost+plus

- Where are the incentives for efficiency?
  - +Jetty Pipeline (US\$ 3/ton)
  - +CPC Finance Charges (fixed amount of 1.75 Rs/l on gasoline and diesel)
  - +CPC wholesale costs
  - +CPC margin
- Without increasing regulatory risk, regulatory agency should
  - Have oversight over formula
  - Periodically recalibrate the formula

# How should formula translate into retail prices?

- Last time formula was applied, it resulted in identical prices among the suppliers
  - Competition, under these conditions, has to be limited to quality
    - Quality includes assurance of purity of fuel
    - Attractive fuel dispensing facilities
    - Convenient locations
    - Courteous service
    - Etc.
- Should price flexibility be allowed?
  - More discussion under consumer issues

# Essential facilities, e.g., pipelines

- Open access must be enforced
  - Non-discrimination
    - Easier to manage with structural or account separation
  - Cost-oriented prices
    - How to discover data to set prices?
    - How to create incentives for investment and maintenance

# Ex-ante, sector-specific regulation

- Requires that regulator has accurate information, e.g., on costs of essential facilities
  - But regulated entities have incentives to withhold or distort information
- Enforcement power needed to obtain information and compel other “good” behaviors
  - But do fines work for government-owned companies with no hard budget constraints?
  - Alternatives?
    - Isn't a regulator with disciplinary power over managers, a super manager?



# Enforcement?

- Gradual imposition of hard-budget constraints
- Appointment of professional boards that maximize company performance
  - Accountability
- Make a sovereign wealth fund the actual owner
  - It should be professionally managed and be subject to performance requirements

# **REGULATORY APPROACHES**

# Regulatory approaches

- Command and control
- Structural regulation
- Conduct (or behavioral) regulation
- Technical (or safety) regulation
- Consumer protection

# P-A problem in regulated industries

- Pure case
  - Government as regulator (Principal)
  - Private firms/operators (Agents); no government operators
- Actual case in most countries
  - Independent (?) regulator within government (P)
  - Private firms and fully/partially government owned firms (As)
- Peculiar forms
  - Independent (?) regulator within government (P)
  - Fully government owned firms (As)
    - Given tradition of massive intra-government litigation, may make sense in India
    - But elsewhere?

# Command & control regulation?

- Can the C&C approach used within government be applied to private actors?
  - Legislation, regulations, licenses constrain actions
  - C&C is likely to add a superfluous layer of management
- Intrusive actions may work with regard to information
- But giving orders will completely negate benefits of private ownership/management

# Structural regulation

- What type and how many organizations can engage in which activities
  - Entry regulation
  - Concessions and licenses
- Enforcing functional separation such as vertical and horizontal disintegration
  - E.g., New Zealand and UK solution of different companies for backhaul and access in telecom
- Merger control
  - Market share of incumbent firms

# Problems with structural regulation

- Boundaries/interfaces shift in dynamic markets such as telecom
- Policing the interface may require sophisticated regulatory interventions
- Most importantly, prior commitments in licenses may preclude compulsory disintegration

# Conduct (or behavioral) regulation

- Permitting (or not permitting) behavior of organizations
  - Product price regulation
  - Access price regulation
  - Regulation of non-price behavior (anticompetitive behavior)
  - Regulation of service and product quality and
  - Environmental regulation



# Technical/safety regulation

- Standard setting and monitoring
  - A form of conduct regulation
- Technical/safety regulation can affect market entry (structural) and competition (conduct)

# **CONSUMER PROTECTION**

# Context of downstream petroleum

- Distributors (discos) interact with consumers through owned facilities and through franchisees
- Imposing duties on discos must take into account the disco-franchisee relationship
  - A regulator reaching down beyond the regulated entity poses legal and regulatory challenges

# Principles

- If consumers can choose among multiple price-quality bundles from independently acting suppliers, consumer protection can focus on information
  - Do consumers have accurate information upon which to base their choices?
    - Are they getting the quantity they pay for?
    - Are they getting petrol, or petrol cut with kerosene?

# Principles

- If suppliers do not act independently, regulatory action required
  - Essentially based on competition-law principles (included in PUCSL Act)
  - Degree of intervention must be calibrated according to degree of deviation from competitive norm

# Information issues

- “Truth in advertising,” best addressed under general consumer protection provisions
  - Possible to link to specific provisions in licenses
  - Need to distinguish between disco and franchisee advertising
  - Essential to coordinate through MOU, provided for in PUCSL Act
- Accuracy of dispensing devices currently under authority of “weights & measures” laws
  - Possible to link to specific provisions in licenses
  - Need to distinguish between disco and franchisee advertising
  - May be possible to coordinate through MOU

# Information issues

- Problems with purity of fuel
  - Standards and procedures set out in licenses can cover disco facilities (from terminal gate to retail location, including pipelines and bowsers)
    - Regulator may require periodic reports or conduct spot checks
  - More challenging at retail outlets which are principally franchisee-owned

# Purity at retail level: Options

- Get the Disco to regulate franchisees: Create incentives for disco to ensure that retail franchisees maintain minimum quality standards
  - E.g., do-it-yourself instructions to consumers combined with reward schemes
  - Discos send out “flying squads”
- Coordinate with Consumer Protection Authority to directly regulate franchisees



# Competition as an instrument of consumer protection

- Can we provide an adequate range of price-quality bundles by independently acting suppliers?
  - We now have a duopoly
  - Workable competition requires 4-5 suppliers
    - Unlikely in short term
    - Even in 2002-04, the market design was for 3 suppliers

# Optimizing choice in a two-supplier industry

- Is it possible to allow pricing flexibility?
  - Based on the formula (give flexibility on margins)
- Is it possible to allow differential pricing in different markets?
  - In the US, at least three different market segments
    - Urban markets, where there is adequate choice
    - Adjacent to highways
    - Low-population-density areas where outlets are sparse
  - Basic principle would be to calibrate regulatory intervention to degree of availability of choice

# If prices are set by formula

- Competition will be limited to quality component
  - Can we have a rational, consumer-first policy re outlets?
    - Locations should not be decided on the basis of concurrence of existing suppliers
    - Permit small-scale resale operations with standards

# Consumer complaints

- At what point does a complaint come to PUCSL?
  - Most complaints re franchisees should first go to disco or to Weights & Measures authorities
  - MOUs should decide which complaints go to CPA and which to PUCSL
  - Even those that come to PUCSL will require PUCSL to get views from discos, leading to delays