State-Owned Enterprises: Justifications, Risks, and Reform

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Lecture Outline

- Benefits of Competition and the Role of Government in a Market Economy
- Justifications for State-Owned Enterprises
- Risks Involving State-Owned Enterprises
- Enterprise Reform and Privatization
- Summary
I. Benefits of Competition and Competitive Markets

- Economic theory has shown that, when certain conditions are met (see slide 6), competitive markets, with private firms supplying goods and services, do best at meeting consumer demands. Why?
  - Firms can freely enter and leave markets
  - Firms will compete with each other to offer goods and services
  - Competition allows new and better, or cheaper versions of the same, items to be offered
  - Competition helps reduce prices for consumers while increasing quality and choices available

Examples of Successful Competition

- Entry of cellular telephone service in many developing countries
  - Made phone service available in remote areas
  - Reduced wait for connections in countries previously dependent on landline service
  - Service provided at attractive prices

- Opening of air service to discount carriers
  - Created inexpensive air travel options in Asia (e.g., Singapore to Malaysia and beyond)
    - Examples: Tiger Airways, Cebu Pacific, Jetstar
  - In U.S., deregulation allowed new carriers offering service at lower prices: Southwest, Jet Blue; earlier on: People’s Express
Why Competition Lowers Prices

- With competition, firms have incentives to lower prices to attract more customers.
- More firms enter market until a price is reached where it is no longer attractive for more firms to enter the market.
- At this price firms are usually “price takers,” or they risk losing a lot of sales to other firms by raising their prices.

When Can Private Provision Be Inadequate: Market Failure

- Economic theory contends that competitive markets offer the most efficient outcomes when the following conditions hold:
  - A market for every good and service
  - Perfect competition (i.e., no agents have market power)
  - Uniform information (everyone knows what anyone knows)
  - Costless contract negotiation and enforcement
  - Uniform tastes and social welfare functions
  - Decreasing returns to scale production structures and no externalities
- What happens when these conditions are not met?
Market Failure: Rationale for Government Activity

- When conditions are violated:
  - **Imperfect information** makes it hard for some markets to produce satisfactory outcomes through unregulated voluntary exchange (financial services, some insurance, arguably medical care)
  - **Monopolies** distort resource allocation, reducing supply of monopolistically produced goods
  - **Externalities** cause some goods to be produced in excess or insufficient amounts, relative to preferences
  - **Some goods may not be supplied at all, or supplied in too small amounts, because markets have trouble limiting access or determining true demand**
  - **Markets may not yield an acceptable distribution of income**

<table>
<thead>
<tr>
<th>Type of goods</th>
<th>Issue</th>
<th>Examples</th>
<th>Problem of private provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk pooling</td>
<td>Moral hazard (insurance leads to riskier behavior) and adverse selection (the riskier behavior seeks insurance)</td>
<td>Health insurance; deposit insurance; flood insurance; public pensions</td>
<td>Market may not exist or be unattractive (e.g., private annuities)</td>
</tr>
<tr>
<td>Public goods</td>
<td>Benefits can be enjoyed by many people simultaneously at zero marginal cost (non-rivalry); hard to exclude access (non-excludability)</td>
<td>National defense, police, environment protection, rule of law</td>
<td>Underprovided (“free riding” —individuals have no incentive to pay for sharing)</td>
</tr>
<tr>
<td>Good with externalities</td>
<td>Direct benefits from personal use and indirect benefits from use by others</td>
<td>Education, immunization programs</td>
<td>Underprovided (difference between cost, private benefit, and social benefit)</td>
</tr>
<tr>
<td>Natural monopolies</td>
<td>Large upfront fixed costs determine decreasing average cost of production</td>
<td>Water provision, electricity, mass transportation</td>
<td>One firm dominates the industry or no production</td>
</tr>
<tr>
<td>Asymmetrical information</td>
<td>Inability of buyers to assess sellers’ information or services can create fraud</td>
<td>Securities markets, medical care</td>
<td>Without regulation, can lead to fraud, serious risks to health, panic</td>
</tr>
</tbody>
</table>
Government’s role in providing services

If there is market failure, government may be able to provide the good at a more optimal level and price:

- Police, national defense, environment protection, courts, primary and secondary education, health care, utilities…

Key issue about government provision of goods:

- Need not require direct production: can use agencies, contracting out, leasing/concessions (for example: highways, airports, regulated private utility)
- Relative efficiency and costs of private vs. public provision of services must be compared (public provision may not be the best option)
- If private provision is used, supplier must be held to service standards. Regulation is needed if monopoly involved (e.g., supplier of electricity or telephone service)

II. Justifications For State-Owned Enterprises

- Private operation is impossible
  - Declining marginal costs; pricing problems
  - Externalities require “special” management
    - Examples: airport authority, postal service
  - Risk or capital scarcity prevents private entry
  - Service is “essential” but consumers can’t pay

- Public sector believes it can do better
  - National security activities

- Each justification requires careful review
Example: Natural Monopoly

- Economies of scale: “bigger is cheaper”
- Efficiency impact of falling marginal cost
  - Efficient prices (price equal to marginal cost) fail to recover total cost
  - Public interest may require lower prices and larger output than private operation would allow
- Typical case: electricity distribution

Natural monopoly

A natural monopoly is characterized by declining average – and often also declining marginal – costs of production:
- A private monopoly will sell Q* at price P* (and make a profit)
- Efficient pricing (price = marginal cost) means that Qs will be sold at price P* -- but this entails a loss!
III. Economic Risks of State-Owned Enterprises

- Management and production incentives
- Effects on consumers
- Pricing strategies
- Financing issues
- Innovation and planning

Efficiency Consequences: Managers’ Incentives

- Enterprise managers often insulated from marketplace incentives, including:
  - Profit pressure from shareholders
  - Quality and price pressure from consumers
  - Innovation pressure from competitors
- Managers’ financial incentives are limited:
  - Salary, bonus, and share incentives limited
  - Cost control may not be rewarded
  - Monopoly position may allow managers to “extract rents” from their positions
Sources of Management Problems

- Principal-agent problem: Managers may focus on own position rather than public good
- Bureaucratic failure
  - Inappropriate selection of managers
    - Based on political relationships rather than managerial expertise.
  - Excessive outside interference
    - Limited managerial discretion → choose the “quiet life”.
  - Inappropriate incentives
    - Inadequate rewards for success → avoid risk.

Efficiency Consequences: Procurement and Financing

- Cost may exceed competitive norms:
  - Wage and employment levels, supplies, rents
  - Investment decisions not always guided by economic considerations
- Government debt guarantees may subsidize costs and create unfair competition:
  - Crowd out private investment
  - Block competitive performance comparisons
Effect of Market Structure and Soft Budget Constraints on Efficiency

- Sheltered market conditions
  - SOEs are often dominant players or have other advantages

- Soft budget constraints
  - Greater access to financing
  - Preferential financing costs
  - Less pressure to repay borrowed funds

Effects on Consumers

- In monopoly the consumer has little choice
- Pricing may cause consumers to buy less, use substitutes, or do without
- Consumer power alone cannot effectively force the enterprise to improve
Financing Issues

- Easy access to current budget transfers may hide losses
- Access to capital budget may represent a subsidy or crowd out other investments
- All budgetary financing, current or capital, should require explicit review

Efficiency Considerations, Long-Term Planning

- Without competition:
  - Product innovation may lag
  - Product quality may be poor
  - Innovation and progress may suffer
- Managers may work by tradition and “seek the quiet life”
- Compare the case of private provision in competitive markets, where competition focuses management
- Empirical work shows that, on average, provision by private firms is more efficient than by public enterprises, even in non-competitive markets*

IV. Reforming State Enterprises: Restructuring vs. Privatization

- Determine the desirable size and structure of the state enterprise sector
- Improve the operations of those enterprises to remain in the public sector (restructuring)
- Divest the rest (privatization)

Decision Tree: Divest or Reform?

- Introduce competition in markets; Ensure transparency & competitive bidding; etc.
- Management contracts preferable where technology & taste don’t change rapidly
- Are PEs potentially competitive?
- Are contractual arrangements with the private sector possible?
- Is divestiture possible?
- Are natural monopolies to be divested?
- Unbundle large firms, increase competition;
  Restrict soft credit, end subsidies/transfers;
  Ensure managerial autonomy to respond to competition;
  Use performance contracts selectively
- Ensure adequate regulations in place

- Is country ready for PE reform?
- Enhance readiness for PE reform
- Ensure adequate regulations in place
- no
Some Examples: Public Utility

- State-Owned Public Utility
  - Essential service
  - Large capital requirements
  - Declining cost of service with size

- Alternatives:
  - Public company supported by tariff revenue
  - Regulated private company

Example: Postal Services

- State-Owned Postal Service
  - Essential service; universal right to service
  - Some consumers cannot be profitably served
  - Declining cost of service with size

- Alternatives:
  - Private parcel and express services
  - Ordinary mail as a state-owned enterprise, but self-funded from revenues
Example: Airline

- Publicly-Owned National Airline
  - Brings prestige, but may lose money
  - Possible benefits to tourism
  - Hard currency earnings (or losses)
  - Employment opportunity (incidence questions)
  - Flag carrier provides more service

- Alternatives:
  - Private carrier(s) with pre-specified subsidy

Example: Telecom

- State-Owned Telecommunication Corp.
  - Profitable monopoly, but may lose money
  - High capital cost to build or modernize; no firm may be capable

- Alternatives:
  - Privatize some or all telephone service
  - Regulated monopoly, service and pricing terms
Restructuring: Key Issues

- Determining which enterprises to restructure, rather than divest
- Increasing enterprise efficiency
- Increasing responsiveness of enterprises to consumer demand

A. Determining an appropriate range of activities

- Examples of good candidates for reform, rather than divestiture:
  - Companies with increasing returns to scale (decreasing marginal costs), e.g. railways, power grid, landline telecommunications
  - Activities with high linkages to the rest of the economy (e.g., airport or highway authority)
B. Improving operations

- **Adjusting the ground rules**
  - Except for special operations, require enterprises to operate commercially
  - Set prices in commercial areas at cost-recovery level
  - Require serious labor bargaining
  - Insist on commercial purchasing standards (“arm’s length” negotiations with suppliers and lenders); require borrowing at market rates

- **Organizational changes**
  - Separate commercial from public-service objectives
  - Separate supervision from the political process
  - Separate the state enterprise ownership function from the state’s regulatory duties

B. Improving operations, cont.

- **Increasing competition**
  - Allow domestic competition.
  - Allow foreign competition.
  - Develop competitive capital markets.

- **Hardening the budget constraint**
  - Reduce or eliminate subsidies.
  - Remove special privileges.
  - Move to market prices for output.
  - Put access to credit on a more commercial basis.
  - Allow inefficient enterprises to go bankrupt.

- **Financial sector reform:** Reduce opportunities for automatic access to loans
C. Reforming Management: Issues

- Link management compensation to enterprise financial performance
- Consider allowing joint ownership of some enterprises, with foreign partners supplying new management and technology
- Performance vs. management contracts
  - Performance contracts
    - Set performance targets for managers, or allow profit sharing
  - Management contracts
    - Privatize the management of the state enterprise

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**Do Performance or Management Contracts Work?**

Performance contracts
- 12 companies in 6 countries
- Improvement in both productivity and profitability

Management contracts
- 20 contracts in 11 countries
- Improvement in neither measure

World Bank, 1995, *Bureaucrats in Business*, Ch. 3
Possible Costs of Enterprise Reform (or Privatization)

- Higher prices and resulting consumer dissatisfaction
- Enterprise closures and loss of employment
- Adverse effects to specific regions and interest groups
- Backlash from rise in salaries for successful managers

D. Privatization

- Trends
- How to privatize
- Impacts of privatization
- Governance
Privatization trends, by sector and region: Data from 1990s

Privatization proceeds (in US$ billions), 1990-99

<table>
<thead>
<tr>
<th>Sector</th>
<th>Privatization Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>150</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>50</td>
</tr>
<tr>
<td>Primary Sector</td>
<td>100</td>
</tr>
<tr>
<td>Financial Services</td>
<td>75</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
</tr>
<tr>
<td>E. Asia &amp; Pacific</td>
<td>50</td>
</tr>
<tr>
<td>S. Asia</td>
<td>25</td>
</tr>
<tr>
<td>Europe &amp; C. Asia</td>
<td>35</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>100</td>
</tr>
<tr>
<td>Middle East &amp; N. Africa</td>
<td>25</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0</td>
</tr>
</tbody>
</table>

NB: Privatization proceeds in Philippines, Japan, Thailand, and Republic of Korea totaled US$47.3 bill. in 1990-97.

How to Privatize

- Preparation
- Methods of privatization
- Possible consequences
Preparing for privatization

- Securing support
- Restructuring the enterprise: often needed to attract buyers
- Designing a regulatory contract

Methods of privatization

- Public sales and auctions
  - IPOs, public auctions, sales of shares of already corporatized or publicly traded enterprises
- Direct sales
  - Negotiated sales to strategic investors
- Management / employee buyouts
- Mass privatization
  - Voucher or coupon privatization
- Restitution
Fiscal impact of privatization

- Will depend upon terms, including:
  - Investment guarantees
  - Employment guarantees
  - Sale price
  - Speed
  - Eligibility conditions for buyers.
- Often privatization programs are overloaded with objectives that are inconsistent.

Impact on budgetary transfers and subsidies: Outlays (in pct. of GDP)

Note: Where State enterprises are profitable, privatization will eventually reduce revenue!
**Public enterprise employment**

![Graph showing public enterprise employment in percent of total employment for different income countries from 1980 to 1998.](image)

Sheshinski & López-Calva (2000)

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**Social and fiscal impact of Privatization**

<table>
<thead>
<tr>
<th>Methods</th>
<th>Impact on employment/wages</th>
<th>Impact on revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competitive environment</td>
<td>Protected environment</td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sales</td>
<td>0 / +</td>
<td>- -</td>
</tr>
<tr>
<td>Negotiated sales</td>
<td>0 / +</td>
<td>-</td>
</tr>
<tr>
<td>Mgmt / employee buyouts</td>
<td>0</td>
<td>0 / -</td>
</tr>
<tr>
<td>Mgmt / lease contracts</td>
<td>0 / +</td>
<td>0 / -</td>
</tr>
<tr>
<td>Mass privatization</td>
<td>0 / +</td>
<td>-</td>
</tr>
<tr>
<td>Restitution</td>
<td>0 / +</td>
<td>- -</td>
</tr>
</tbody>
</table>

* + Highly positive; + Positive; 0 No impact; - Negative; - - Highly negative.

*Refers to environment prior to privatization. For simplicity, assume removal of state protection after privatization.

Gupta, Schiller, Ma, & Tiongson (*J. of Econ. Surveys*, 2001)
### Effect of Privatization on Performance: Cross-country evidence

Results of 3 studies covering over 200 firms

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Mean value before privatization</th>
<th>Mean value after privatization</th>
<th>Mean change due to privatization**</th>
<th>% change due to privatization</th>
<th>% of firms with improved performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>9%</td>
<td>13%</td>
<td>+4%</td>
<td>46%</td>
<td>68%</td>
</tr>
<tr>
<td>Efficiency*</td>
<td>97%</td>
<td>116%</td>
<td>+19%</td>
<td>19%</td>
<td>82%</td>
</tr>
<tr>
<td>Investment</td>
<td>14%</td>
<td>19%</td>
<td>+5%</td>
<td>35%</td>
<td>61%</td>
</tr>
<tr>
<td>Output*</td>
<td>94%</td>
<td>172%</td>
<td>+79%</td>
<td>84%</td>
<td>80%</td>
</tr>
<tr>
<td>Employment</td>
<td>22,936</td>
<td>23,222</td>
<td>286</td>
<td>1%</td>
<td>50%</td>
</tr>
<tr>
<td>Leverage</td>
<td>48%</td>
<td>44%</td>
<td>-5%</td>
<td>-10%</td>
<td>67%</td>
</tr>
<tr>
<td>Dividends</td>
<td>3%</td>
<td>2%</td>
<td>+7%</td>
<td>231%</td>
<td>80%</td>
</tr>
</tbody>
</table>

* Relative to year of privatization

** Change in percentage points.

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### Impact on welfare: Case study evidence

12 firms in 4 countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Industry</th>
<th>Welfare gains as percentage of annual sales in the last year before privatization</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK:</td>
<td>National Freight</td>
<td></td>
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<tr>
<td></td>
<td>British Airways</td>
<td></td>
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<tr>
<td></td>
<td>British Telecom</td>
<td></td>
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<tr>
<td>Malaysia:</td>
<td>Sports Toto</td>
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<tr>
<td></td>
<td>Kelang Container Terminal</td>
<td></td>
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<tr>
<td></td>
<td>Malaysian Airline Sys.</td>
<td></td>
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<tr>
<td>Mexico:</td>
<td>Mexicana Airline</td>
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<td></td>
<td>Aeromexico</td>
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<td></td>
<td>Telefonos de Mexico</td>
<td></td>
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<tr>
<td>Chile:</td>
<td>Chile Telecom</td>
<td></td>
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<td>Enersis</td>
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<td></td>
<td>Chilgener</td>
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*a. See also Shirley and Walsh (2001).*
Summary of empirical evidence

- There is strong evidence that privatization has a positive effect on enterprise performance (in competitive sectors)
- There is strong evidence that privatization improves the fiscal situation
- There is strong evidence that privatization has a positive impact on financial sector development
- There is no evidence that privatization necessarily results in lower total employment (as opposed to employment at state enterprises)
- There is limited evidence on the impact of privatization on total welfare

Measures to mitigate the social impact of privatization

- Even if overall unemployment doesn’t rise with privatization, there may be serious distributional consequences.
  - Privatization will likely hurt some workers, at least temporarily; need social safety net.*

- Possible responses:
  - Earmarking proceeds to finance social safety nets
  - Promote sequential downsizing
  - Implement other labor market policies: severance payments, public works programs, job search assistance, training

*See Gupta, Schiller, & Ma (1999) and Kikeri (1997).
Governance problems after privatization

- Many firms, once sold to the private sector, create externalities that lead to the need for regulation.
  - Monopolies, like utilities (water, gas)
  - Public health hazards (tobacco)
- Privatization can therefore lead to opportunities for corruption (say in the form of weak regulation) at this stage.
- Utilities in Latin America; privatized firms in the Russian Federation
- Beware: *A poorly designed privatization program may be worse than none at all.*

Summary

- Natural monopoly, externalities, risk, high cost provide bases for public ownership. *But*
- Many factors promote SOE inefficiency
- Addressing inefficiency may require management contracts, privatization, or a review of objectives and governance
- Empirical studies show that privatization often yields significant efficiency gains
- Must consider policies to assist adversely affected employees, e.g., severance payments, job search and training, etc.