

A Study of State Policies Affecting Competition

Passenger Road Transportation Sector

March 14, 2007

Study Commissioned by the Competition Commission of
India



Key Objectives

- To study the passenger road transport segment's competition policies:
 - inter state
 - intra state
- To study the impact of transport policy on efficiency and performance of the passenger road transport network
- Lubricate efficiency of development across borders.
 - Not to preclude any section/ region in the competitive era.
- To advocate enhanced competition and institutional reforms
- Specification of the Alternative Model:
 - Competitive Tendering
 - USO
 - Entry Filters
 - Regulator

- Focus on seven states with different levels of economic development with 2 states within the same region.

Western Zone: Maharashtra & Rajasthan

- *Eastern Zone:* West Bengal & Orissa
- *Southern Zone:* Tamil Nadu & Kerala
- *Northern Zone:* Himachal Pradesh- land locked, no other mode of transport. (taken up as a special case on CCIs request)

Scope

- **Focus** - “internal learning and external learning”.
- **External Learning:** did competition help governments and consumers elsewhere in the world- through secondary sources.
 - **Developed Countries**
 - **Developing Countries**
- **Internal Learning:** state level constraints affecting competition through secondary & primary data sources-
 - **State Transport Authority (STA)- policy implications**
 - **State Transport Corporation (STC)- operations public domain**
 - **Private Operators- bus operations in private domain**
 - **Bus Passengers- Users’ Satisfaction level**
 - **USO- Indian Telecom Sector**



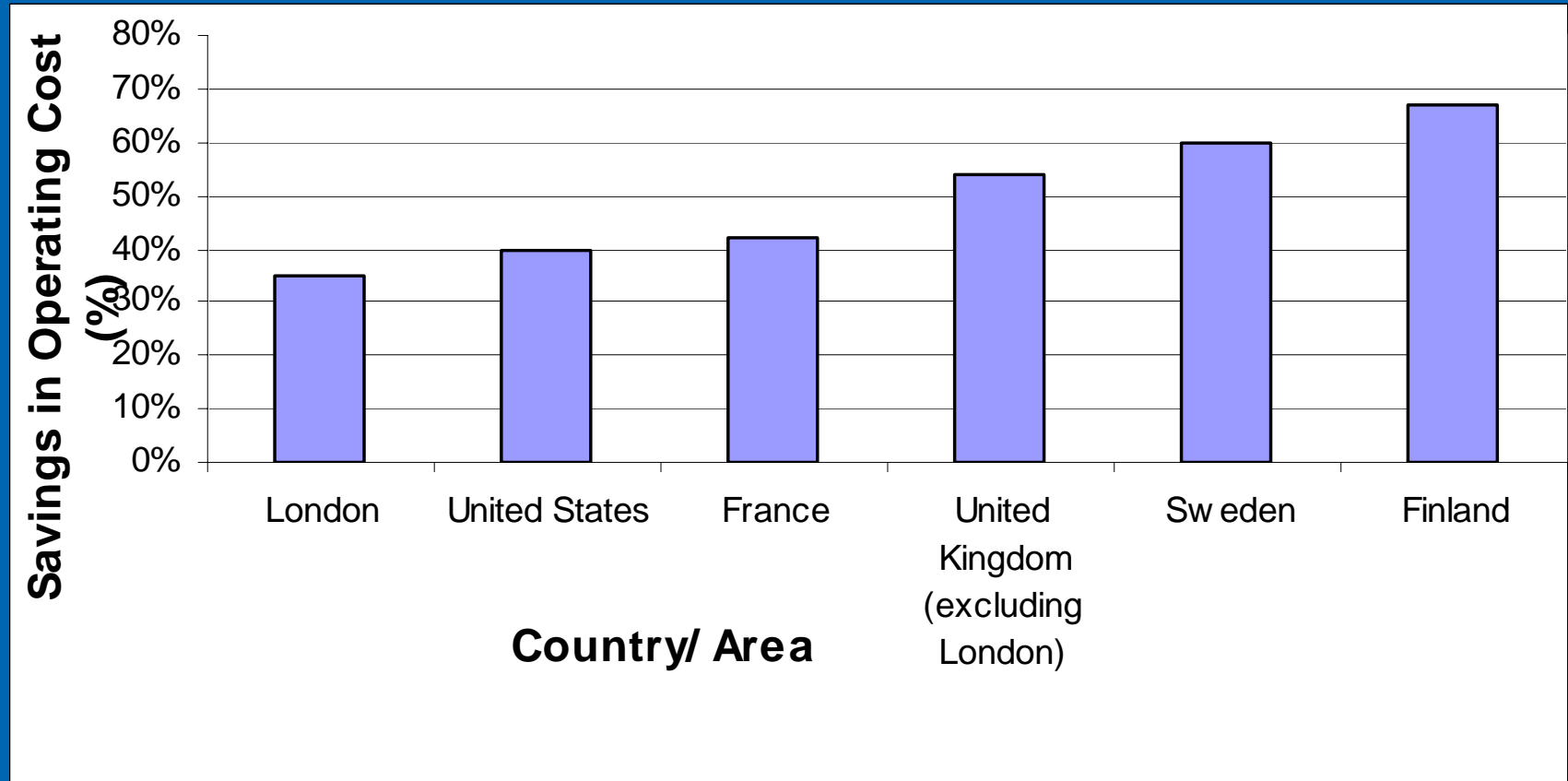
External Learning

Developed Countries

- **Modality Adopted-** Competitive Tendering- In Finland, Sweden, France & United States
 - Privatization & Deregulation- United Kingdom (except London)
 - Privatization with Regulation- London
- **Year of Reform-** Finland (1997), Sweden (1989), France (2003), United States (1977-1988), United Kingdom (1985)
- **Bus Service Supply-** Improved in Finland, Sweden, France, United States & United Kingdom
- **Environmental Standards-** Improved in Finland, Sweden, France & United Kingdom
- **Frequency of Buses-** Improved in Finland, Sweden, France & United Kingdom
- **Ridership-** Improved in Finland, Sweden, France, United States & London
 - Decreased- United Kingdom
- **Government Support-** Reduced in Finland, Sweden, France & United Kingdom

External Learning

Cost Savings due to Competitive Tendering - Developed Countries



This data is pertaining to developed countries. No such trend is observed for developing countries.



External Learning- Sri Lanka

- **Modality Adopted-** Deregulation followed by nationalization.
Re-entry of the private sector.
- **Year of Reform-** Deregulation- 1907- 1927
Nationalization- 1958
- **Bus Service Supply-** 1) Oversupply of buses at profitable routes.
2) Idling of buses at terminals and stops increased.
3) Increased accident-risk factors
4) Productivity of buses decreased.
- **Ridership-** Increased overloading of buses
- **Cost-** Increased
- **Government Support-** Rs.2-3 billion per annum.
The state bus sector subsidized by around 30%.

External Learning- Developing Countries

Chile (Santiago)

- **Modality Adopted-** Deregulation, Competitive tendering introduced at a later stage
- **Year of Reform-** 1980
- **Bus Service Supply-** Oversupply of bus services.
- **Environmental Standards-** Decline in air quality conditions
- **Ridership-** Increase in ratio of cost to value of service received during 1980 and 1987.
- **Cost-**
 - 1) cost per bus km- declined by 54%.
 - 2) cost per passenger journey- declined by 5%.
 - 3) effectiveness (cost per passenger km) is about twofold.
 - 4) increase in efficiency
- **Government Support-** Subsidies declined by 49% during 1985-1998

Alternative Models for Passenger Road Transport

Public Monopoly

- Excessive Operating Costs.
- Perverse Managerial Incentives
- Lack of Dynamism

Public and Private Participation

Infrastructure

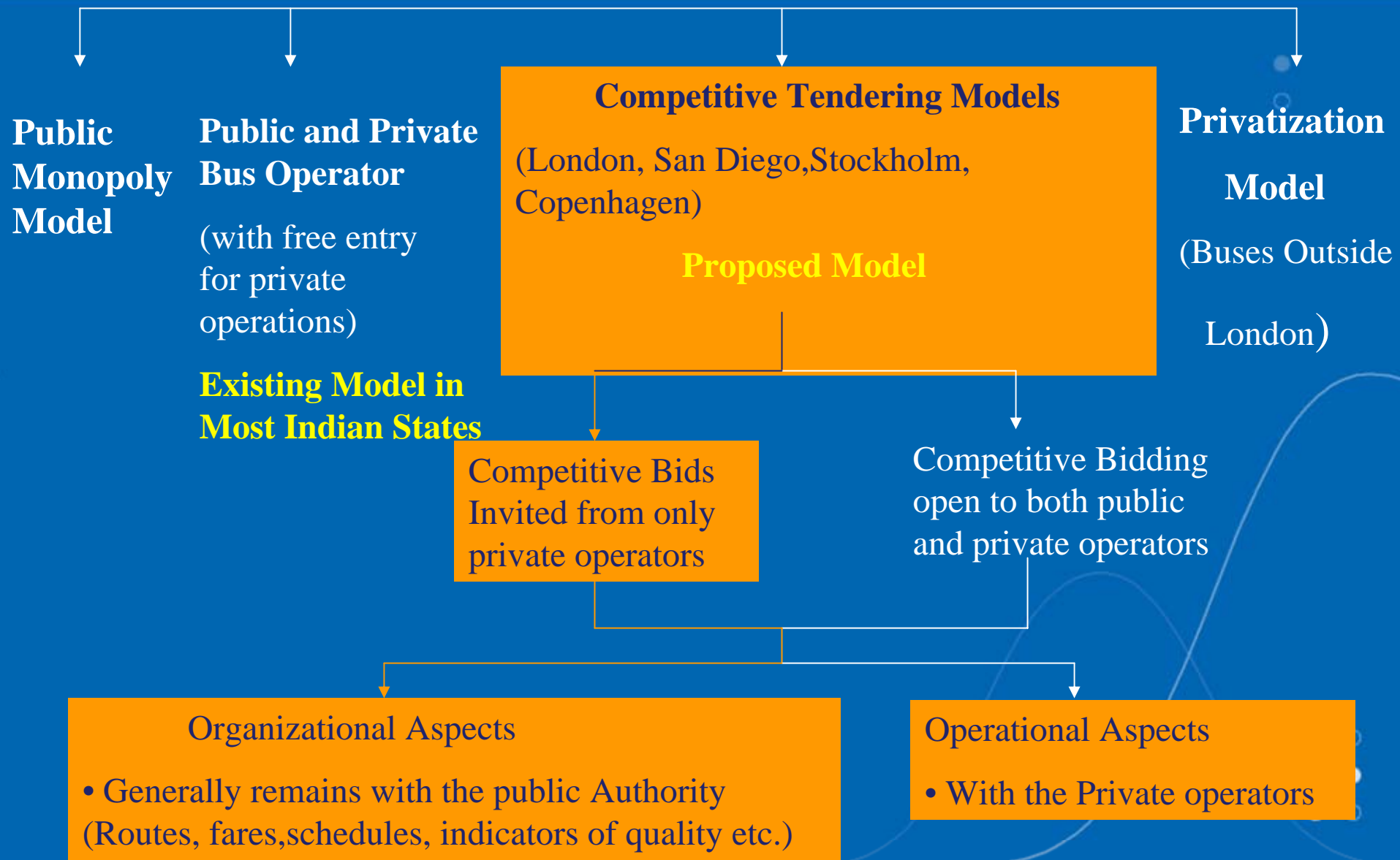
- Sub-Contracting
- Management Contracts
- Concessions
- Asset Sale

Services

- Competition for franchises

Note : In our study , we discuss Private Participation in Services only.

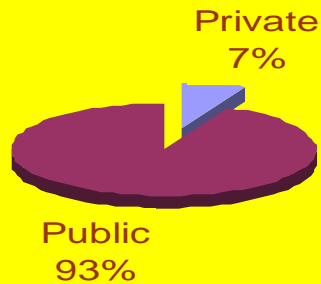
Alternative Models for Passenger Road Transport



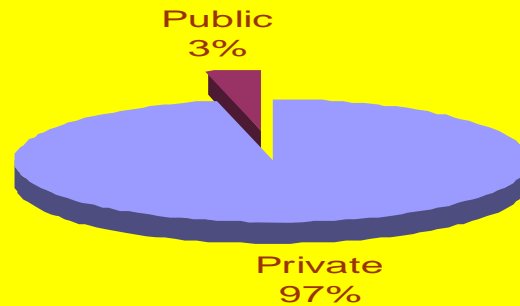


Ownership Structure- Share of Buses

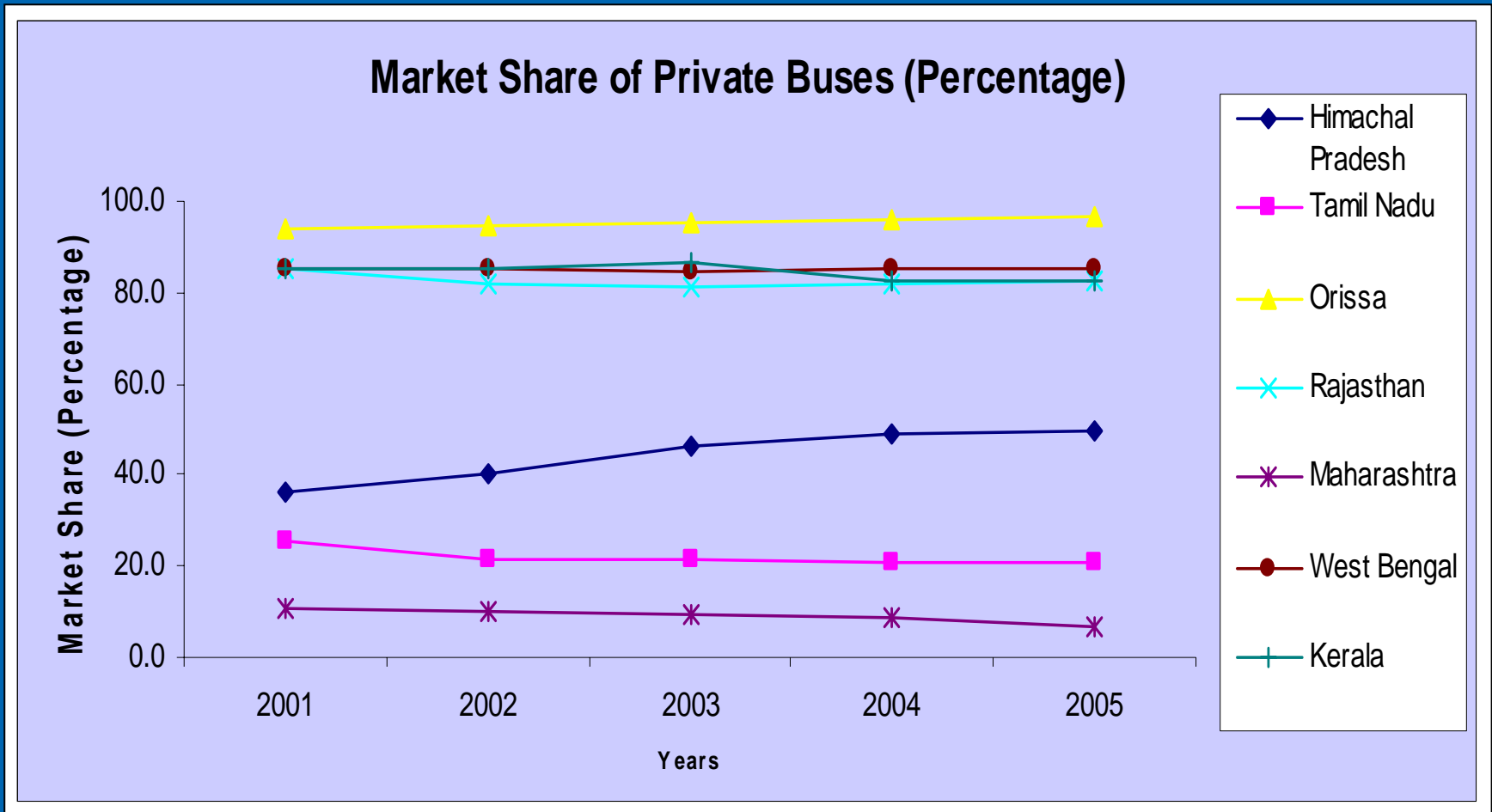
**Maharashtra: Private share vs Public share
(Per cent Share)**



**Orissa: Private share Vs Public share
(Per cent Share)**

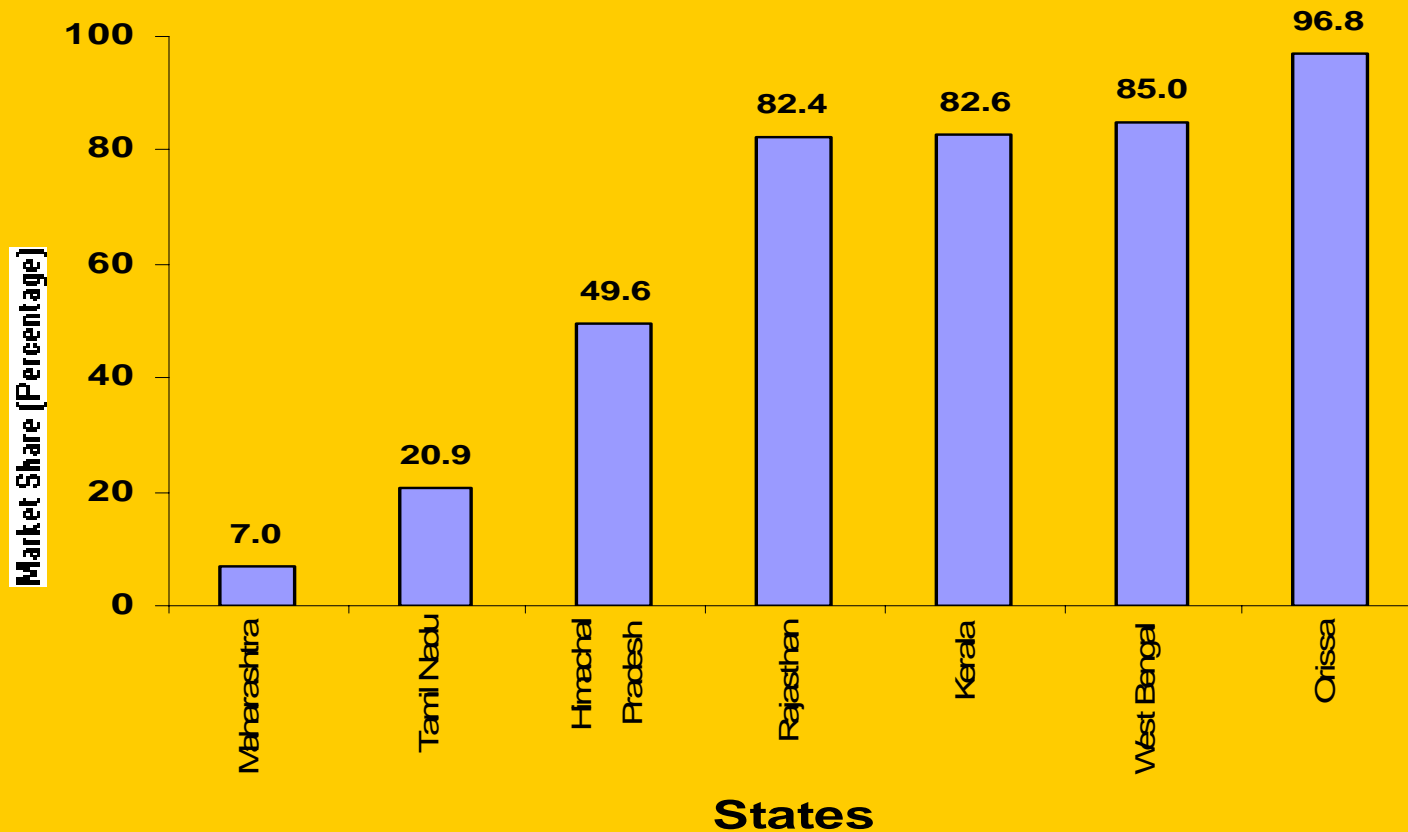


Ownership Structure- Share of Buses



Ownership Structure- Share of Buses (2005)

Market Share of Private Buses (Percentage)





Award Criteria

Award Criteria

Payment to / from Franchise for a given Tariff

Lowest Tariff

- 13/75 : Award goes to Lowest Bidder.
- 24/75 : Awarded Contract was higher than lowest Bid
(To avoid Winner's Curse Effect)
- 38/75 : Awarded contract was Lower than the Lowest Bid.

Multi - Criteria Point Formula



Bus Market Division

Bus Market Divided Between

(for a given tariff)

Commercial

Non Commercial

Private Operator Needs No Support from Public Authority

Here , the Transport Authority may collect Payments from the franchise

To Private Sector Operator after a Competitive Subsidy Bidding Process and USO

Here , the Public Authority makes Payment to the franchisee.

Universal Service Obligation (USO) Policy in Passenger Transportation

- **Providing minimum set of passenger transportation services to all users regardless of their place of living and affordable price.**
- **USO reconciles three contending criteria of Passenger Transport:**
 - **Availability**
 - **Accessibility**
 - **Affordability**

Universal Service Obligation (USO) Policy in Passenger Transportation (Contd.....)

- **Availability** - Provision of passenger transport in uneconomic areas such as rural and remote.
- **Accessibility** : Uniform , non discriminatory tariff , service and quality in service area.
- **Affordability** : Provide service at affordable prices , in uneconomic areas , this may mean dual tariff (Rural tariff below cost).

Universal Service Obligation (USO) Policy in Passenger Transportation (Contd.....)

- **The universal service support policy came into effect from 1st April,2002 for telecom in India.**
- **Envisaged distribution of subsidy from universal service fund through bidding process on the basis of benchmark costs.**
- **Evolve these benchmark costs for providing passenger transport services in rural, remote and non-competitive routes.**
- **Consultants should stipulate benchmark cost which form the basis for evaluation of bids received from the service providers taking into cost factors and socio - economic and geographical indicators.**



Methodology Suggested

- **First step is the collection of reliable data on Capex , Opex and Revenues.**
- **To save time and effort, representative sample units from each region need to be selected for data collection.**
- **For selecting the representative sample , economic criteria should be adopted.**
- **Factors that influence costs and revenues in the base year.**
- **Project rate of increase / decrease year by year of the base cost and revenue figures.**



USO Implementation Guidelines

- The end benchmark is derived from three separate components : capital expenditure, operating expenditure and revenues.
- The subsidy benchmark should serve for a 5-7 year period.
- Most important : the benchmark should be suitable for serving as ‘Ceilings’ in the bidding process.



Central Motor Vehicle Act & Current Scenario

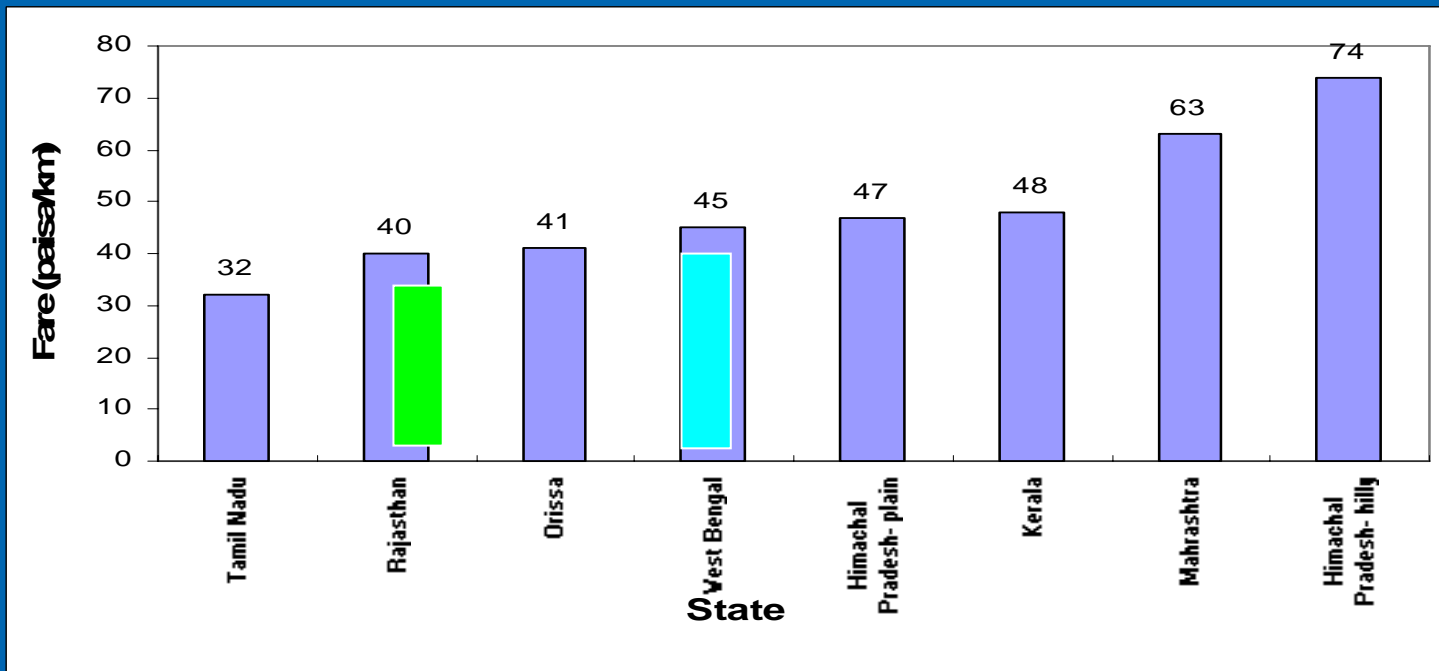
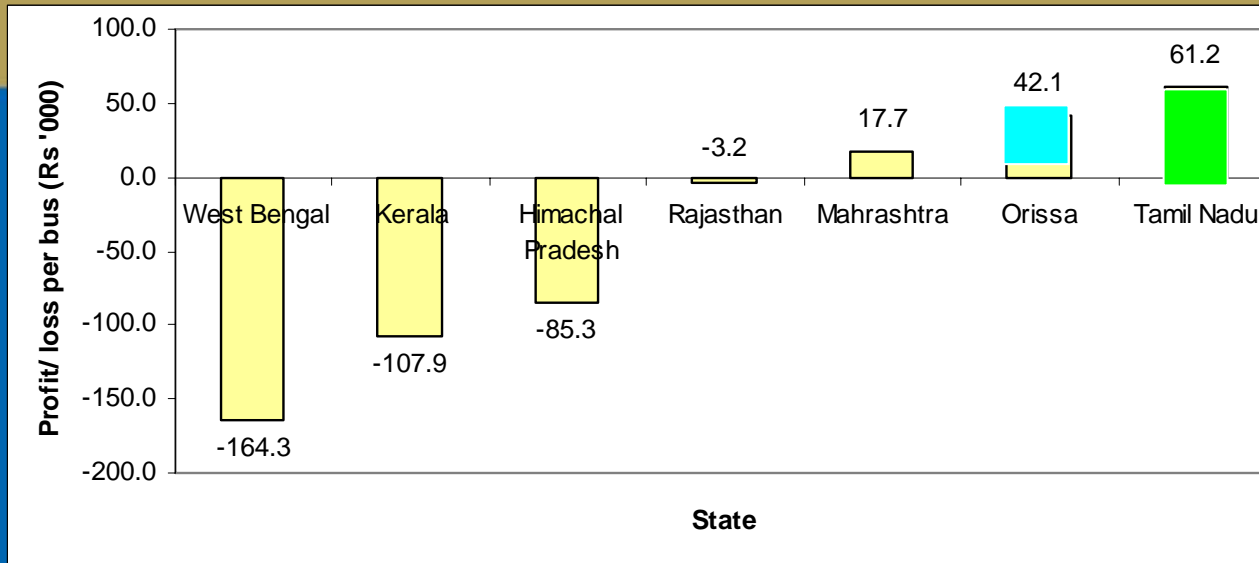
- In letter- No entry/exit barriers for private operators-In spirit ?
- All intra state routes are nationalized - **Maharashtra**
- Private operator can obtain permits for the routes other than nationalized routes - **Rajasthan, West Bengal , Orissa , Kerala.**
- Frozen private entry into passenger road transport sector - **Tamil Nadu.**
- STA imposed ban on grant of new permits on 100 per cent National/ State Highways - **Himachal Pradesh (H.P.)**
- Stopped grant of permit for temporary operations and contract carriage - **H.P.** - **Need for a Federal and Provincial Regulators**

State transport policies-

Fare Structure- Various Practices

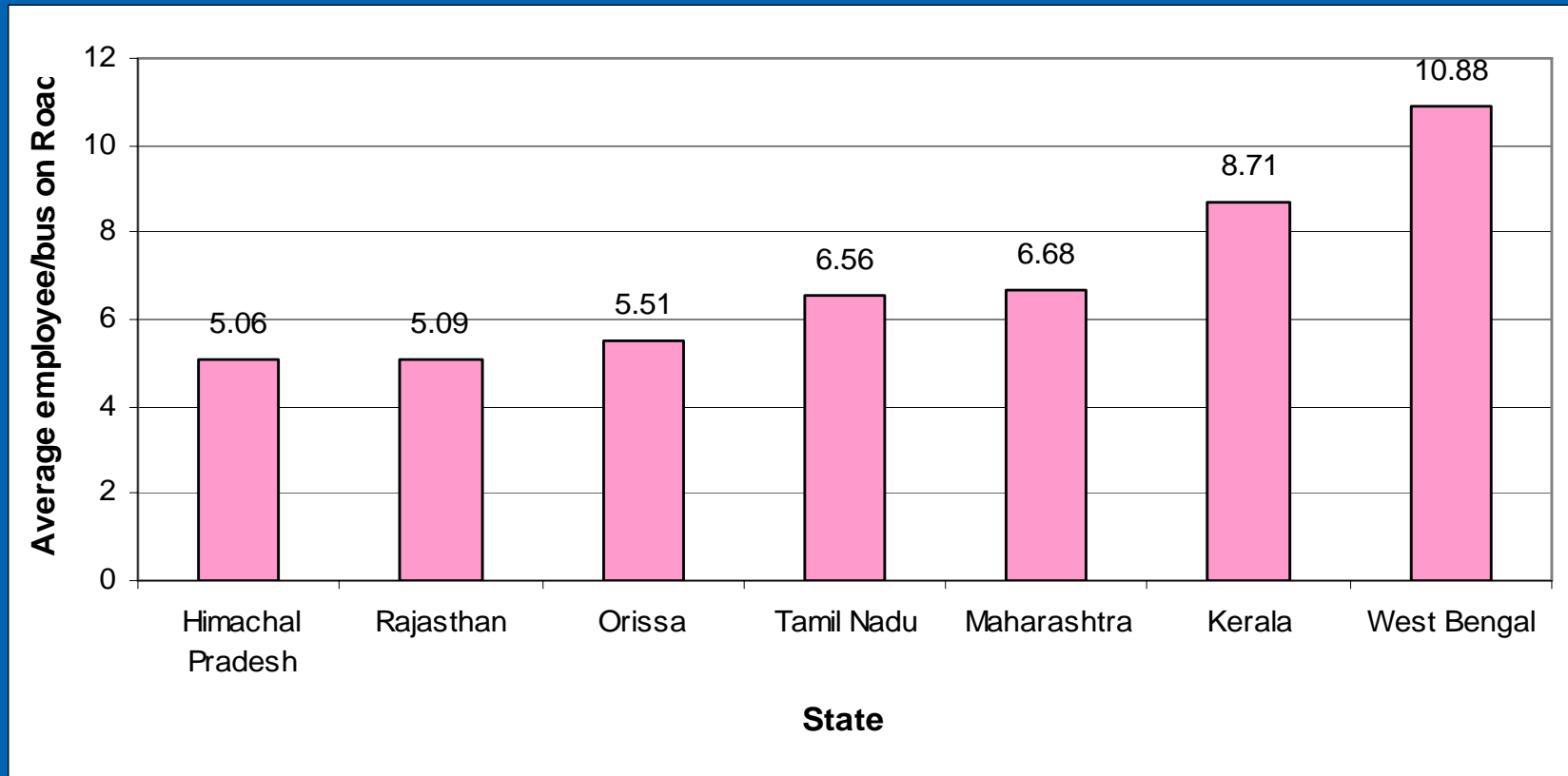
1. Fare fixed by government- **All States**
 - Same fare applicable for stage carriage of both
 - State Transport Corporation
 - private operators.
2. Separate fare for City, Town, Mofussil, Ghat & Express Services- **Tamil Nadu**
3. The fare is charged in a slab of five kilometers - **Rajasthan**
4. Fare system- Graduated Fare System

Pricing & Profitability Structure



Partial Productivity Measure

Employees/ Bus on Road





Partial Productivity Measure

- Rajasthan STC has been cost effective and has adequate contribution of taxes to state exchequer despite being levying moderate tariffs.
- West Bengal and Kerala on the other hand shown opposite trend despite levying higher tariffs than Rajasthan.
- Maharashtra consumers prefers the clandestine operation of the private operators to STC's operation.
- Tamil Nadu STC has done very well except in the measure labour productivity due to the problem of over staffing and higher personal wage.
- Himachal Pradesh is not able to have cost-effective bus transport alternative that is affordable to the general public due to hilly terrains.



Indices



Following three indices were constructed:

- Competition index**
- Efficiency index**
- Consumer satisfaction index**





Indicators-Competition Index

- The ratio of private buses to total buses
- Registration time
- Permit charges for more than one region
- Asymmetric Information : Permission to change fleet size and Permission to change time table.
- Operation of public and private bus on the same routes (Inter State)
- Operation of public and private buses on the same routes (Intra State)



Indicators-Efficiency Index

- **Surplus before tax**
- **Percentage of fleet utilisation**
- **Effective Kilometres Per staff per day**
- **Kilometres per litre of HSD**
- **Accidents per lakh effective Kilometres**

N Indicators-Consumer Satisfaction Index

- Average waiting time for a bus
- Skills and training of the staff (driver and conductor)
- Punctuality of the bus.
- Quality of bus service
 - Stoppage on each stands
 - Over stay at the bus stations
 - Stoppage in between bus stands
 - Overcrowding of buses
 - Method of ticket collection
 - Frequency of breakdown



Rankings of States

Rankings of states based on Competition Index, Efficiency Index and Composite Consumer Satisfaction Index

State	Rank of Competition Index	Rank of Efficiency Index	Rank of Composite Consumer Satisfaction Index
Rajasthan	1	1	1
Orissa	2	3	6
Kerala	3	6	5
Tamil Nadu	4	5	3
West Bengal	5	7	4
Himachal Pradesh	6	4	7
Maharashtra	7	2	2



Principal Component Analysis



The technique is used for development of composite index:

- Multivariate analytical tool
- Compression of Data
- Hierarchy of Goals/ Criteria's
- Weighting to obtain composite indicator- objective assignment of weights to reflect their importance in the composite index.



Data Analysis-

State Transport Corporations All India.....

Principal Component Analysis (PCA) was used for analysis of major STCs of the country

Variables Analyzed- Revenue, Cost, Physical Performance, Daily Bus Utilization, Staff Position, Fuel Performance & Accidents

Variable	Relative Weight (%)
Revenue	20.4
Cost	19.9
Physical Performance	19.3
Daily bus utilization	4.2
Staff position	16.7
Accidents	19.5

Omitted variables- Fuel performance



Recommendations

- **Model Proposed**
 - PPP: Competitive Bidding for permit granting and assigning routes.
 - PPP: Franchising or Contracting of routes & USO Implementation
 - Minimum fleet size / Accidents Filters.
- **Organisational Arrangement: Competitive Tendering Department in STCs**
- **Regulators – Federal to ensure Motor Vehicle Act Properly Interpreted in tune with the Competition Act 2002**
- **Equal Treatment for Public and Private Operators: Regional Regulator**
 - Same taxation regime.
 - Allow accessibility of private operators to public bus shelters.



Recommendations

• Other Main Reasons Cited for Regulatory Authority at the Federal and provisional levels to :

- manage the supply of buses
- ensure the qualitative continuity of non-profitable services
- maintain the service parameters between 'quality and fare'
- ensure that there are no barriers to entry of bus operators
- plan and develop the bus service as a network of services and routes
- protect the rights of the bus passengers
- see that there is uniformity in adherence to the enabling legislation in the sector
- rationalise the tax structure



Difficulties with Tendering

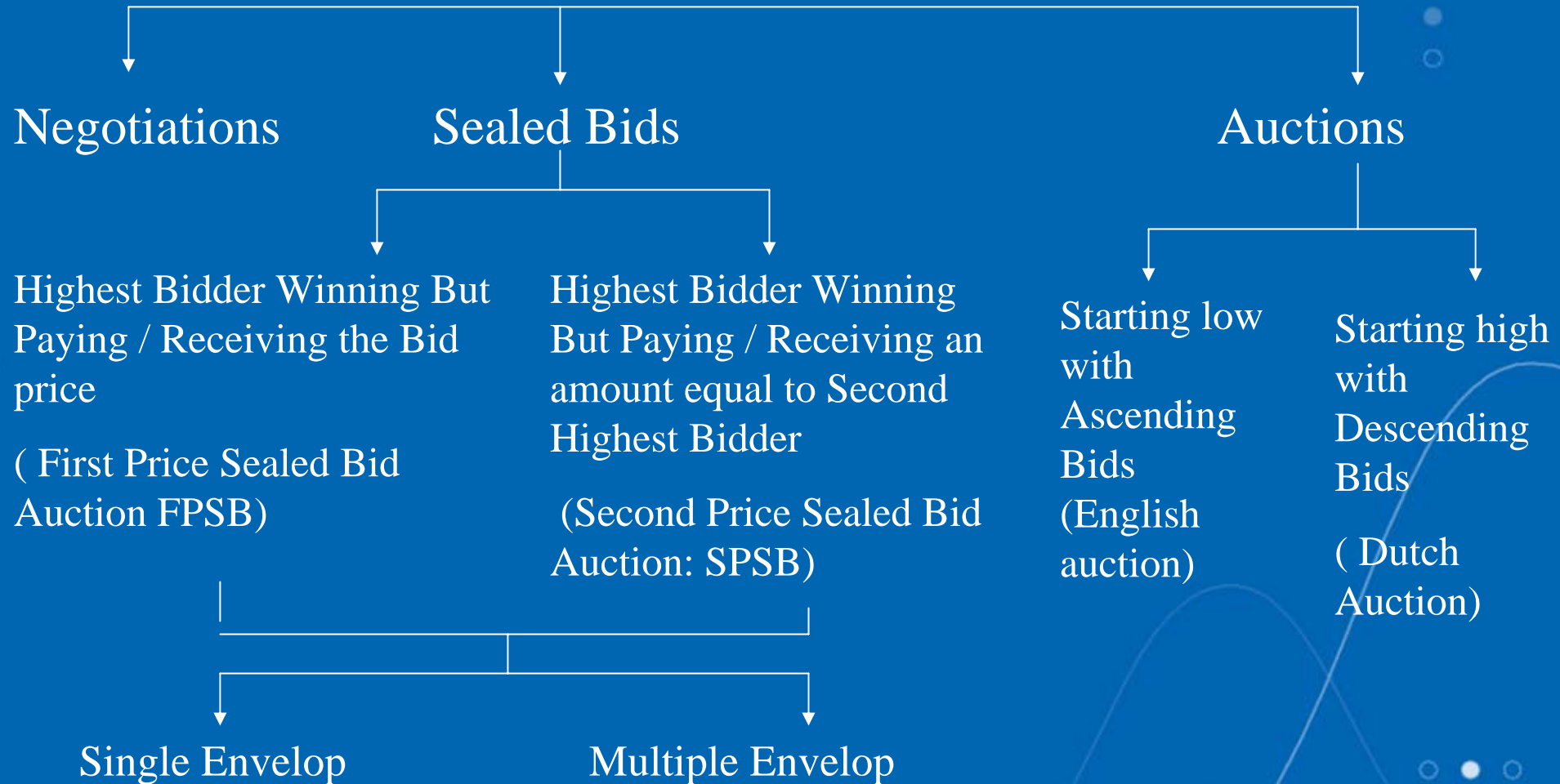
- **Number of Bids.**
- **The Winner's Curse**
 - **SPSB**
 - **Renegotiations**
- **Specification , Administration and Monitoring of Contracts**

Thank You





Types of Bidding



- When Bidders are Risk Neutral , all four Bidding Types give the Same Result on Average .