



INTEGRATED TRANSPORT CONCEPTS COSTS AND PRICING

TRANS ASIAN RAIL NETWORK COURSE

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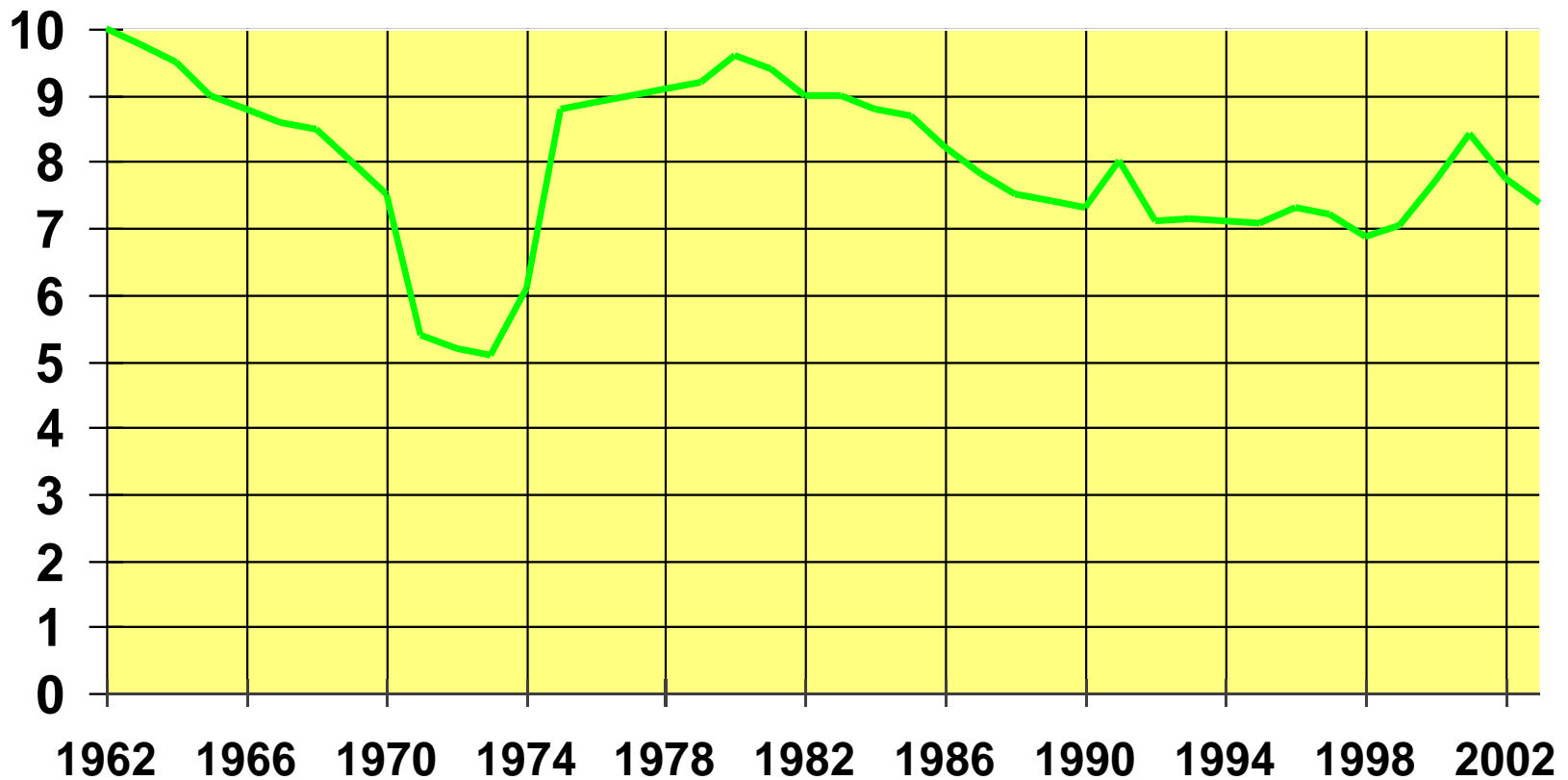
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A THOUGHT

- “The Indian economy is at a critical juncture in its developmental process. The ***rate of growth has increased but it needs to accelerate further.*** The faster growth must also be accompanied by a ***wider regional dispersion of benefits.*** Achievement of this objective will require ***massive expansion and improvements in the various modes of transport***”
- Planning Commission’s ‘Integrated Transport Policy’, document, 2001, GOI

The trend for total logistics cost as a % of revenue across the industry has settled in the region of 8%





CONCEPT OF INTEGRATED TRANSPORT

- A process of spatial displacement of person/s and goods seamlessly using more than one mode
- Brings about cost transparency and efficiency



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- May involve the
 - i) analysis of both intra and inter integration between the modes
 - ii) analysis of the external costs
 - iii) optimization of land use
 - iv) synthesis with the other social welfare policies



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- The four I's
- Information + Interchange + Investment = Integration
- Accessibility to detailed knowledge of the system with high quality seamless interchange facilities and an policy facilitating the change in the nature of demand will obviously lead to high usage



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- In the context of the course the focus of the presentation will be on Intermodal transport of goods using containers



Intermodal Transport

Movement of goods in one loading unit, which uses successively several modes of transport without handling of the goods themselves in transshipment between the modes

- Two or more different modes .
- At least one transshipment .
- Main haulage mode is not road, which works to complete the last mile.



The Intermodal Chain

1. Loading/Unloading-Shipper/Consignee
2. Pre haulage / Post haulage
3. Transshipment
4. Terminal Transfer
5. Marshalling Yard Transfer
6. Main Haulage: Road
7. Main Haulage: Train/Inland Waterway
8. Main Haulage: Maritime

Costs

Loading/unloading – Shipper/consignee

Warehousing companies / departments that dispatch/receive the consignment.

- Cargo Storage Costs
- Loading/unloading costs
- Storage Costs for transport units (containers/trailers)
- Leasing/Owning costs for transport units
- Cost of machinery/equipment hire/ownership



Costs

Pre Haulage / Post Haulage

Service is typically provided by road haulage companies or departments completing the last mile in the chain.

- Cost of ownership/movement of vehicles
- Infrastructure costs such as tolls and taxes
- Detention costs related with the transit times/delay involved in truck movements.



Costs

Transshipment & Terminal Transfer

Locations in which loading units are physically transshipped from one vehicle to another.

- Capital cost of equipment necessary for transshipment
- Cost of equipment operation
- Cost of storage area used for transshipment yard.



Costs

Yard Transfer

Locations in which loading units are physically combined/re-arranged to form trains or moved from feeder to main line vessels.

- Capital cost of equipment necessary for handling if any required
- Cost of equipment used-locomotives, wagons etc. in the operation
- Cost of storage area used for marshalling / transshipment yard.



Costs

Main Haulage: Road / Rail / Marine

Service is typically provided by carriers-Shipping Lines, Rail Companies or even large LSPs, and cover the primary haulage for the entire chain.

- Capital cost of ownership and operation of vehicles-Wagons, Motive Power for Trailers, Barges, Ships etc.
- Cost incurred for use of infrastructure-taxes, tolls, marine charges, rail access levies etc.
- Detention costs related with the transit times/delay involved in movements of trains, ships, vehicles etc.



Assessing Costs & Prices

- The complexity of the supply chain reflects directly on the manner of organization of the intermodal marketplace.
- Characterized by a multiplicity of players, operators, and service providers-interacting at various levels in non-standard forms.
- Unlike other transport sectors, intermodal marketplace is generally highly competitive



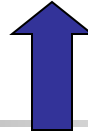
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- Published prices tend to vary diversely from real prices-volume, strategic, frequency based discounts common and often not clearly documented
- Cross subsidization between trade lanes is often common
- Market setup may in fact lack transparency and even result in distortions and efficiency limitations.

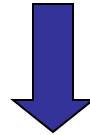
Organizational Goals



1. Revenue Maximization



2. Cost Reduction (Minimize)



3. Net Profitability (Up)



4. Customer Satisfaction (Up)



5. Productivity (Maximize)



What does the Customer Want?



Increasing

Response Time Sensitivity

Value Addition Expectation

Flexibility

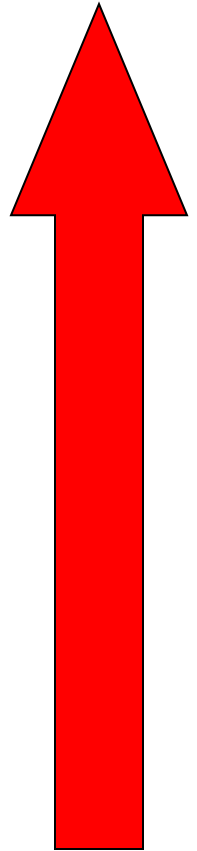
Improvements in Process Quality

Need for Reliability

Cost Consciousness

Standardization & Modularity

Information Sensitivity



What does the Customer Want? Cont.



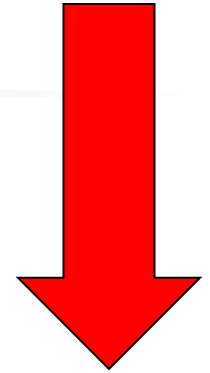
Decreasing

Lead Times

Costs

Uncertainties

Number of Stages in the Supply Chain



Delay Differentiation (Postponement)

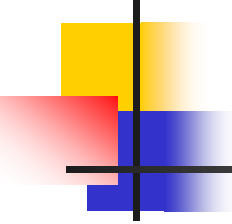
Compete on Service

Move from Functions to Processes



NEED FOR MULTIMODAL TRANSPORT

- Economic development in the World necessarily leads to increasing trade.
- Given the fact that a competitive environment punishes inefficiency need for minimizing the transaction costs cannot be underestimated.
- Therefore ***multimodal transport incorporating single contract, single freight and single document is the remedy.***



Solution: Using Logistic Service Providers (LSPs)-The outsourcing model

- Multimodalism at one level emerges from the need felt in the modern production and distribution process for effective supply chain, and at the same time re-enforces the **inability** to develop such a supply chain with maximum efficiency.
- Effective Supply Chains increasingly depend on **professional input** and this in turn creates the market space for a Logistics Service Provider
- LSPs not only provide the professional inputs needed to develop and maintain modern supply chains, they are also able **to leverage certain strengths that emerge from this specialization and offer greater efficiency at lower costs.**



What can a LSP Do?

- Transportation, Warehousing, Distribution
- Order Management
- Reverse Logistics
- Collections-Billing, Invoicing
- Disposal and Salvage of Waste/Damaged goods
- IT services
- Business Process Outsourcing (BPO)?



Who is a LSP?

- Carrying & Forwarding Agents
- Transporters
- Shipping Agents
- Shipping Lines
- Custom House Agents
- Providers of Value Added services
- System Developers etc.



4th Party Logistics

- All of the above are essentially 3rd Party service providers
- Today Logistics is moving to the next level i.e. 4th Party
- A real LSP will not necessarily be able to do all of the above, but to provide access to and to manage the services that such agencies provide.



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- Integration provided by 4PLs creates transparency in costs as well as pricing for supply chain activities.



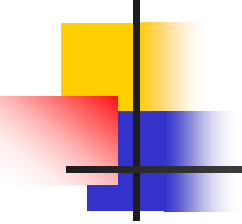
Benefits for Clients:

- Effective Distribution of Finished Goods
- MIS reporting for improvement in overall decision making and production planning
- Reduced Inventory levels and consequently inventory holding costs
- Meeting Statutory requirements
- Introducing new technologies and responding to Market Dynamics
- **IMPROVE THE BOTTOM LINE**



Selecting an LSP-What to Look For?

- Primary Facilities-Warehouses, Transport Fleets-Ships, Wagons, Trucks
- Support Services-IT Systems, Material Handling Equipment, Specialized Facilities such as Temp. Control, Bonding etc.
- Manpower
- Long terms growth prospects
- Industry knowledge

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- “Organization of the Soil”
 - Knowledge of local laws and statutory regulations
 - Receptivity to new ideas-even from competition-concept of “creative imitation”



BIBLIOGRAPHY & ACKNOWLEDGEMENTS

- Applied Transport Economics S Cole
- Integrated Transport Policy Document 2001 Government of India (GOI)
- Shri Sharat Misra President J M Baxi



THANK YOU