Transport Sector Performance Indicators (Case Study – Sri Lanka)

by

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## Economic, Social and Environmental Indicators

1. **Per Capita GDP**: US$ 947 - 2003
2. **Population**: 19.252 million
3. **Population Growth**: 1.3
4. **Population Density**: 307 persons per sq. km
5. **Gini coefficient**: 0.48
6. **Literacy Rate**: 90.1% (92.5% male, 87.9% female)
Policy Priorities in the Transport Sector

• Ensure accessibility of all communities to actively participate and share in economic development and its benefits;

• Provide effective and efficient transportation system: road & rail network, road and rail freight and passenger transport services to meet the demand & price the private mode of transport at a marginal cost price;

• Recovery within a period of eight months of all rural transport services which had ill effects during last three years;
Policy Priorities in the Transport Sector

- Construction of a high mobility road network
- Development of logistic chain with inter-modal and multi-modal links
- Reduce urban traffic congestion by implementing traffic management programs
- Connectivity of rail network by land connection to India
- Ensure minimum services to meet the demand of urban and rural poor
Objectives of Recovery Plan

- Increase operational fleet by about 1,200 buses within a six month period
  - by rehabilitating buses which need small units and subunits, tyres, and batteries
  - Total operational fleet will increase to 5100 from 3900
- Procure 500 new buses under Indian Line of Credit;
Objectives of Recovery Plan...

- Introduce a new effective and efficient management system to the Cluster Bus Companies through SLCTB, without privatisation.
- Restore all services provided on social grounds including rural and school services that were curtailed.
- Give complete freedom to the new Management with provision of full accountability for services, operation and management.
Objectives of Recovery Plan...

- Establish an effective monitoring system to assess the performance of the public owned bus system;
- Create small business units for activities other than for bus operations within the SLCTB/Cluster Bus Companies;
- Identify all cost units with a clear separation, demonstrate all other units which are not linked to bus operations;
Objectives of Recovery Plan...

- Reduce recurrent expenditure of Cluster Bus Companies over a period of one year with replacement of public service obligation agreement through the National Transport Commission;
Size of the Transport Sector within the Economy

- **8.3% of the GDP is from the Transport Sector – 2003**
  - Per Capita GDP US $ 943
  - Contribution of transport sector ranging from 6% to 11% during last decade;
  - Total direct employment is 745,000;
  - Estimated value of fixed assets Rs. 260 billion (US $ 26,000 million);
  - Estimated total losses - 45% of perishable vegetables and 35% of paddy;
  - Other product loss is 28%
Size of the Transport Sector within the Economy...

- Average annual expenditure is Rs. 34 billion (Equivalent of US $ 3,400 million);
- 6% to 9% of the Government budget for transport sector;
- Total economic loss due to transportation is estimated as Rs. 38 billion;
- Total economic loss due to non-existence of accessibility is estimated as Rs.64 billion per annum;

Note: Urban traffic congestion, produce not reaching markets, transportation losses, time lost due to poor access to the services had been taken for calculation.
Objectives of the Current Transport Policy (Local and Global)

- Enhancing connectivity to close transport and information division between poor communities and dynamic markets;
- Revitalizing rural development;
- Promoting development of small and medium scale enterprises;
- Increasing employment and mainstreaming poverty reduction objectives in sectoral development strategies; and
- Incorporating participation and empowerment in approaches aimed at assisting poor regions directly.
Current Transport Strategies

- Upgrading port network;
- Building a national highway and an integrated road network;
- Enhancing the performance of the bus system;
- Modernizing railway;
- Improving access to telecommunication facilities;
- Bringing internet to rural community.
Thrust Areas of the Transport Policy

- building a modern road network;
  - providing safe road network;
  - enhancing the most important bus transport system; and
  - modernizing the railway by a reform within public sector

- rural access roads and rural transport services
- Public Service Obligation of Transport Services;
- Pricing of transport services and infrastructure;
- Welfare effects of the transportation;
- Accessibility of urban and rural poor for services and employment;
- Environmental effects and productivity;
- Quality and effectiveness of transport services and infrastructure including public cost minimization
## Transport Infrastructure

### Roads:

<table>
<thead>
<tr>
<th>Category</th>
<th>Length (Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total network</td>
<td>108,000</td>
</tr>
<tr>
<td>National Roads</td>
<td>11,236</td>
</tr>
<tr>
<td>Provincial Roads</td>
<td>15,450</td>
</tr>
<tr>
<td>Local Authority Roads</td>
<td>74,500</td>
</tr>
<tr>
<td>Forest, Wildlife, Irrigation &amp; Estate</td>
<td>8,000</td>
</tr>
</tbody>
</table>

Approximately 2000 villages do not have proper accessibility which is equivalent to 5% of the total human settlements in the country.
**Transport Infrastructure...**

- **Railway: Total Network - 1,524 km**
    - Single Line: 1,112.02 km
    - Double Line: 120.18 km
    - Third Line: 13.37 km
    - Total: 1,246.00 km
  - BG Yard Line: 279.00 km
  - Total BG Track: 1,524.00 km
  - Length of Track not in Operation – 295.57 km
    - 134 villages connected only by inland water ways and causeways (North East of the Country)
Transport Services – Rolling Stocks as at May, 2004

• Road Sector – Active Fleet 1,274,000
  – Private sector buses 17,840
  – Cluster Buses 3,900
  – Motorcycles 450,000
  – Three Wheelers 164,000
  – Lorries 86,740
  – Motor Cars 138,345
  – Dual Purpose/ Vans/ 4WDs 176,348
National Road Network and Railway Network with transportation nodal points.

<table>
<thead>
<tr>
<th>Province</th>
<th>Zero Access to roads</th>
<th>Partial access to roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Province</td>
<td>Not Available</td>
<td>Not available</td>
</tr>
<tr>
<td>Eastern Province</td>
<td>98</td>
<td>195</td>
</tr>
<tr>
<td>North Central</td>
<td>52</td>
<td>43</td>
</tr>
<tr>
<td>North Western</td>
<td>53</td>
<td>64</td>
</tr>
<tr>
<td>Central</td>
<td>116</td>
<td>202</td>
</tr>
<tr>
<td>Sabaragamuwa</td>
<td>153</td>
<td>198</td>
</tr>
<tr>
<td>Sourthern</td>
<td>114</td>
<td>178</td>
</tr>
<tr>
<td>Uva</td>
<td>167</td>
<td>314</td>
</tr>
<tr>
<td>Western</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>769</td>
<td>1,231</td>
</tr>
</tbody>
</table>
Transport Services – Rolling Stocks...

• Railways
  – Steam Locomotives  2
  – Locomotives  82
  – Rail Cars  2
  – Diesel Hydraulic Power Unit  56
  – Coaches  1,260
  – 234 villages are accessible only by rail track in the Island
Growth of Transport Sector and Economy

Graph 1 - Economic Growth and Transport Demand Growth (past trends)
Poverty vs. Rural Accessibility

Per Capita Income
Per Capita Expenditure
Un-accessible rurals
Population Distribution by Sector - 2001

Source: Census of Population and Housing – 2001, Dept of Census and Statistics
### Expenditure and Outputs

<table>
<thead>
<tr>
<th>Item</th>
<th>Railways</th>
<th>Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent Expenditure (Rs. Million)</td>
<td>2,583</td>
<td>3,910</td>
</tr>
<tr>
<td>Capital Expenditure (Rs. Million)</td>
<td>1,675</td>
<td>1,735</td>
</tr>
<tr>
<td>Total Expenditure (Rs. Million)</td>
<td>4,258</td>
<td>5,645</td>
</tr>
<tr>
<td>Output Ratio</td>
<td>0.58</td>
<td>0.45</td>
</tr>
<tr>
<td>Quality Index</td>
<td>0.65</td>
<td>0.54</td>
</tr>
<tr>
<td>Accepted output (PKm in Million)</td>
<td>4,812</td>
<td>4,497.6</td>
</tr>
<tr>
<td>Total Economic Loss (Rs. Million)</td>
<td>1,029.3</td>
<td>962.0</td>
</tr>
</tbody>
</table>

Source: SLR, MOTH&CA, and AMTRAC
Source of data as Transport Performance Indicators

- Road Agencies (National, Regional, & Local) – Network;
- Transport Regulatory Agencies (National & Regional) – service and fleet;
- Public Own Bus Companies – fleet & service data;
- Sri Lanka Ports Authority;
- Sri Lanka Airport & Aviation Authority;
- Central Bank of Sri Lanka;
- Department of Censes and Statistics;
- Universities and Ministry of Transport – Journey Time Surveys, Regional freight flows; Attitude Surveys;
- Department of Motor Traffic, Provincial Councils and Local Authorities;
Data gaps identified and tentative solutions

- Local Authority and Provincial Council level data for road conditions;
- Supply & Demand of buses at provincial and local levels;
- Household expenditure on transportation (on regular basis);
- Data on maintenance of roads (routine, and periodic);
- Vehicle emission data.
Data gaps identified and tentative solutions...

- Collection of random sample data for road conditions;
- Case study for operated vehicle km for private motor vehicles;
- Sample survey for vehicle occupancy;
- Expenditure for transport from household surveys used to estimate data for non-available years;
- Need capacity building at grass root level