Roads Works Costs per Km
Source: World Bank Reports

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The Information

- The objective is to create a database of actual maintenance, rehabilitation and construction work costs per km.
- Information from World Bank completed highways projects, from 1995 to 1999, was reviewed.
- Information was collected from 40 countries.
- 93 work costs per km were found or estimated.
Shape of the Information

• The descriptions given to the road works on World Bank reports are very general (for example: rehabilitation, strengthening, periodic maintenance, reconstruction, improvement, construction, etc.).

• Most of the time no detailed information was found, such as road width, terrain, traffic, overlay thickness, regravelling thickness, rehabilitation surface, improvement type, etc.

• It was only possible to estimate average costs and costs statistics for a series of road work classes based on the general descriptions.
Road Works Classes

• Paved Roads
  - Seals (reseals, surface dressings)
  - Functional Overlays (thickness <= 5.0 cm)
  - Structural Overlays (thickness > 5.0 cm)
  - Rehabilitation (strengthening, reconstruction)
  - Construction (widening, new construction)

• Unpaved Roads
  - Regravelling
  - Rehabilitation
  - Improvement
  - Paving
### Average Works Costs per Km

**Paved Roads**

- Seals: $20,000/km
- Functional Overlays: $56,000/km
- Structural Overlays: $146,000/km
- Rehabilitation: $214,000/km
- Construction: $866,000/km

**Unpaved Roads**

- Regravelling: $11,000/km
- Rehabilitation: $31,000/km
- Improvement: $72,000/km
- Paving: $254,000/km
Median Works Costs per Km

• Paved Roads
  - Seals 19,000 $/km
  - Functional Overlays 56,000 $/km
  - Structural Overlays 146,000 $/km
  - Rehabilitation 183,000 $/km
  - Construction 959,000 $/km

• Unpaved Roads
  - Regravelling 11,000 $/km
  - Rehabilitation 31,000 $/km
  - Improvement 75,000 $/km
  - Paving 255,000 $/km
Range of Works Costs per Km

• Paved Roads
  - Seals                  5,000 - 32,000 $/km
  - Functional Overlays   30,000 - 107,000 $/km
  - Structural Overlays   74,000 - 198,000 $/km
  - Rehabilitation        45,000 - 700,000 $/km
  - Construction          142,000 - 1,832,000 $/km

• Unpaved Roads
  - Regravelling          9,000 - 13,000 $/km
  - Rehabilitation        17,000 - 47,000 $/km
  - Improvement           11,000 - 114,000 $/km
  - Paving                62,000 - 609,000 $/km
### Number of Observations and Standard Deviation of Works Costs per Km

<table>
<thead>
<tr>
<th>Road Type</th>
<th>Activity</th>
<th>Observations</th>
<th>Cost per Km</th>
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<tbody>
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<td>Seals</td>
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Average and Range of Roads Works Costs per km

Average and Range of Actual Roads Works Costs per Km

- Reseal
- Functional Overlay
- Structural Overlay
- Construction
- Rehabilitation
- Improvement
- Regravelling
- Paving