# Roads Works Costs per Km Source: World Bank Reports

Rodrigo Archondo-Callao April 2000

#### 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

- Functional Overlays

- Structural Overlays

- Rehabilitation

- Construction

20,000 \$/km

56,000 \$/km

146,000 \$/km

214,000 \$/km

866,000 \$/km

Unpaved Roads

- Regravelling

- Rehabilitation

- Improvement

- Paving

11,000 \$/km

31,000 \$/km

72,000 \$/km

254,000 \$/km

## Median Works Costs per Km

Paved Roads

- Seals

- Functional Overlays

- Structural Overlays

- Rehabilitation

- Construction

19,000 \$/km

56,000 \$/km

146,000 \$/km

183,000 \$/km

959,000 \$/km

Unpaved Roads

- Regravelling

- Rehabilitation

- Improvement

- Paving

11,000 \$/km

31,000 \$/km

75,000 \$/km

255,000 \$/km

## Range of Works Costs per Km

- Paved Roads
  - Seals
  - Functional Overlays
  - Structural Overlays
  - Rehabilitation
  - Construction

- 5,000 32,000 \$/km
- 30,000 107,000 \$/km
- 74,000 198,000 \$/km
- 45,000 700,000 \$/km
- 142,000 1,832,000 \$/km

- Unpaved Roads
  - Regravelling
  - Rehabilitation
  - Improvement
  - Paving

- 9,000 13,000 \$/km
- 17,000 47,000 \$/km
- 11,000 114,000 \$/km
- 62,000 609,000 \$/km

# Number of Observations and Standard Deviation of Works Costs per Km

•	Paved	Roads
		INGGG

7	10,000 \$/km
12	24,000 \$/km
6	42,000 \$/km
33	144,000 \$/km
13	567,000 \$/km
	12 6 33

#### Unpaved Roads

- Regravelling	4	2,000 \$/km
- Rehabilitation	4	17,000 \$/km
- Improvement	6	37,000 \$/km
- Paving	10	153,000 \$/km

#### Average and Range of Roads Works Costs per km

Average and Range of Actual Roads Works Costs per Km

