

# Productivity differentials in the public sector in South Asia

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# Variations in hospital costs, 1973-2000

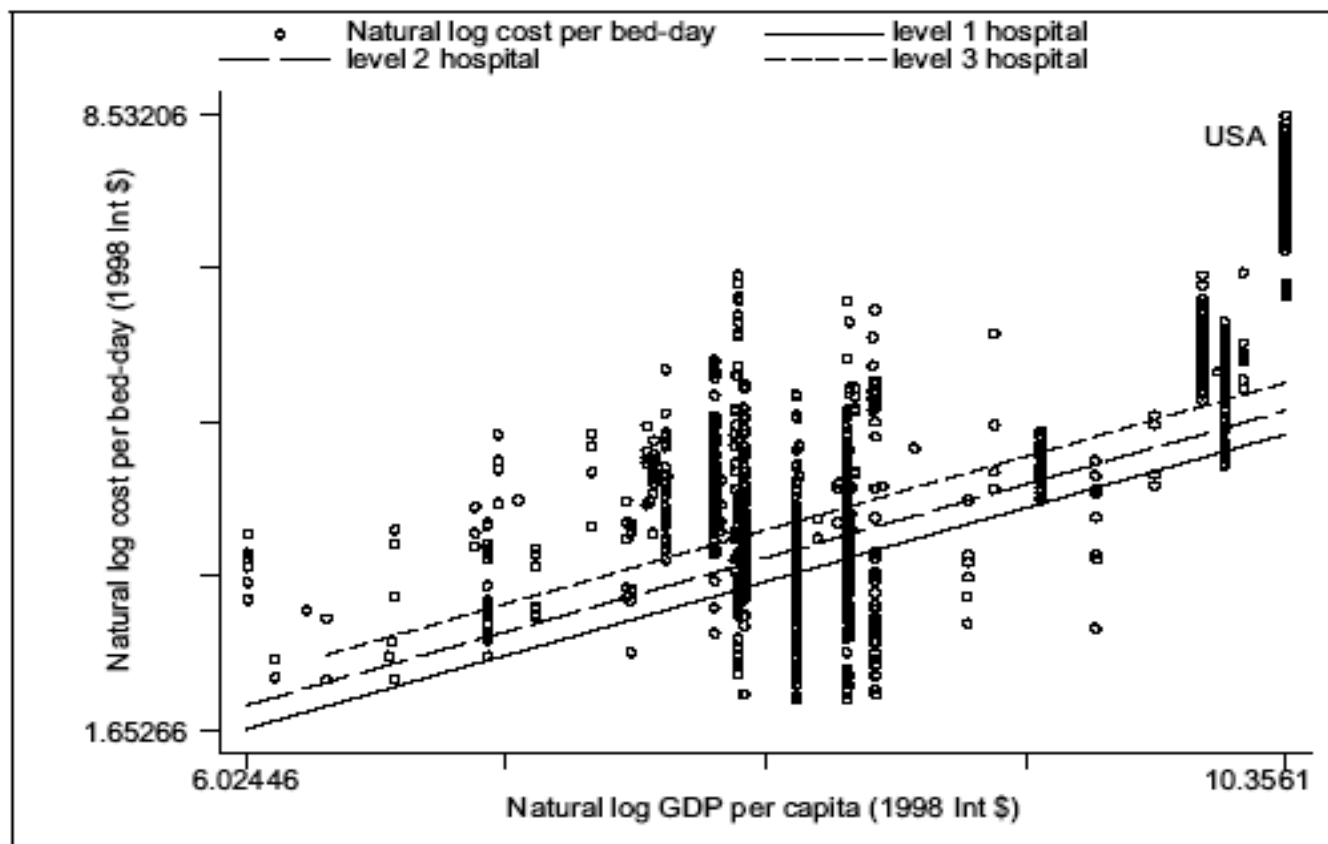


Figure 1

Regression lines for level one, two and three hospitals against the natural log of GDP per capita. (The Y-axis is the dependent variable: natural log of cost per bed day) Cost in 1998 I\$ N = 1171

# Observations

- Wide cross-country variations in productivity and efficiency suggested by data
- Yet, global policy prescriptions continue to work on assumption of fixed productivity
  - WDR 1993, WHO GCEA 2000-2004
  - CMEH 2001
- Limited interest in exploration of cross-country variations

# Data on public facilities

- Surveys of public health facilities
  - Sri Lanka, 1997
  - Bangladesh, 1997
  - Nepal, 2002
- Potential for comparative analysis:
  - Hospitals in all three countries are budget funded from general revenues sources and some user fees; no insurance funding
  - Same instrument used in all three surveys, with slight changes to make questionnaires more context specific
- Nationally representative samples
  - Sri Lanka: 250 public hospitals
  - Bangladesh: 121 public hospitals
  - Nepal: 20 public hospitals and 80 health posts
- Data collected on costs, outputs, time and resource allocation, structural quality

# Types of analysis

- Comparison of costs, outputs, time and resource allocations and structural quality
- Efficiency measurement:
  - Ratio measures
  - Unit costs estimated using step-down accounting
  - Cost and production functions
  - Stochastic frontier analysis
- Ongoing funded by SANEI. Preliminary results presented here.

# Background context (1997)

	Bangladesh	Sri Lanka
<b>Population</b>	124 million	19 million
<b>Population density (per sq km)</b>	950	290
<b>GDP per capita (US\$)</b>	\$340	\$830
<b>IMR</b>	60	20
<b>Public health expenditure (% GDP)</b>	1.0%	1.7%

# Comparison groups

Bangladesh hospital type	Type	Sample size	Share of beds
THC's	1	83	46%
District and General hospitals	2	21	16%
Medical College hospitals		8	
Specialist hospitals		9	
<b>TOTAL</b>		<b>121</b>	

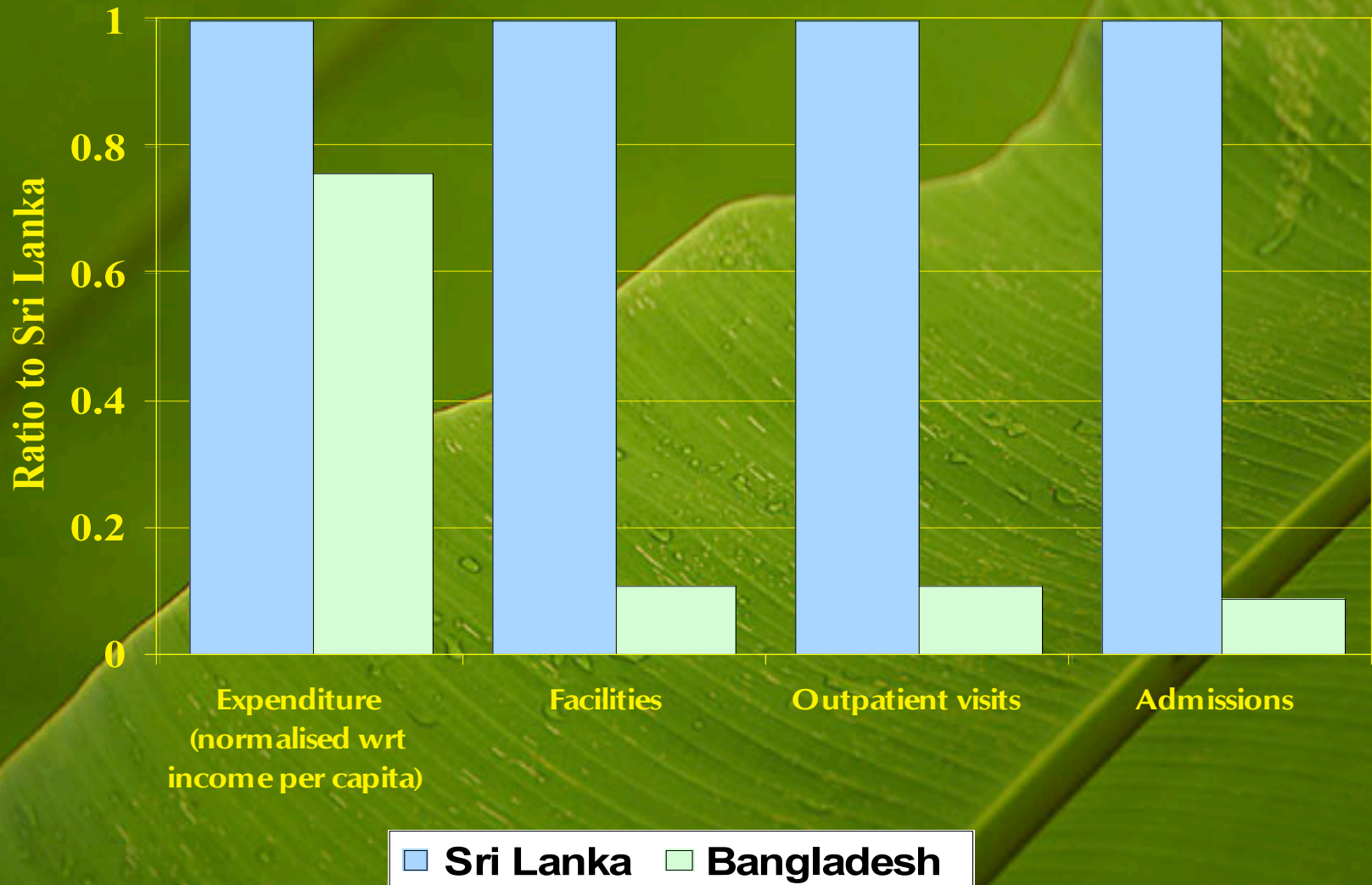
Sri Lankan hospital type	Type	Sample size	Share of beds
MOOH/MCH Units		40	
Outpatient only facilities		19	
Basic inpatient facilities	1	123	37%
Intermediate inpatient facilities	2	22	21%
Complex inpatient facilities		14	
<b>TOTAL</b>		<b>218</b>	

# Comparison of facilities

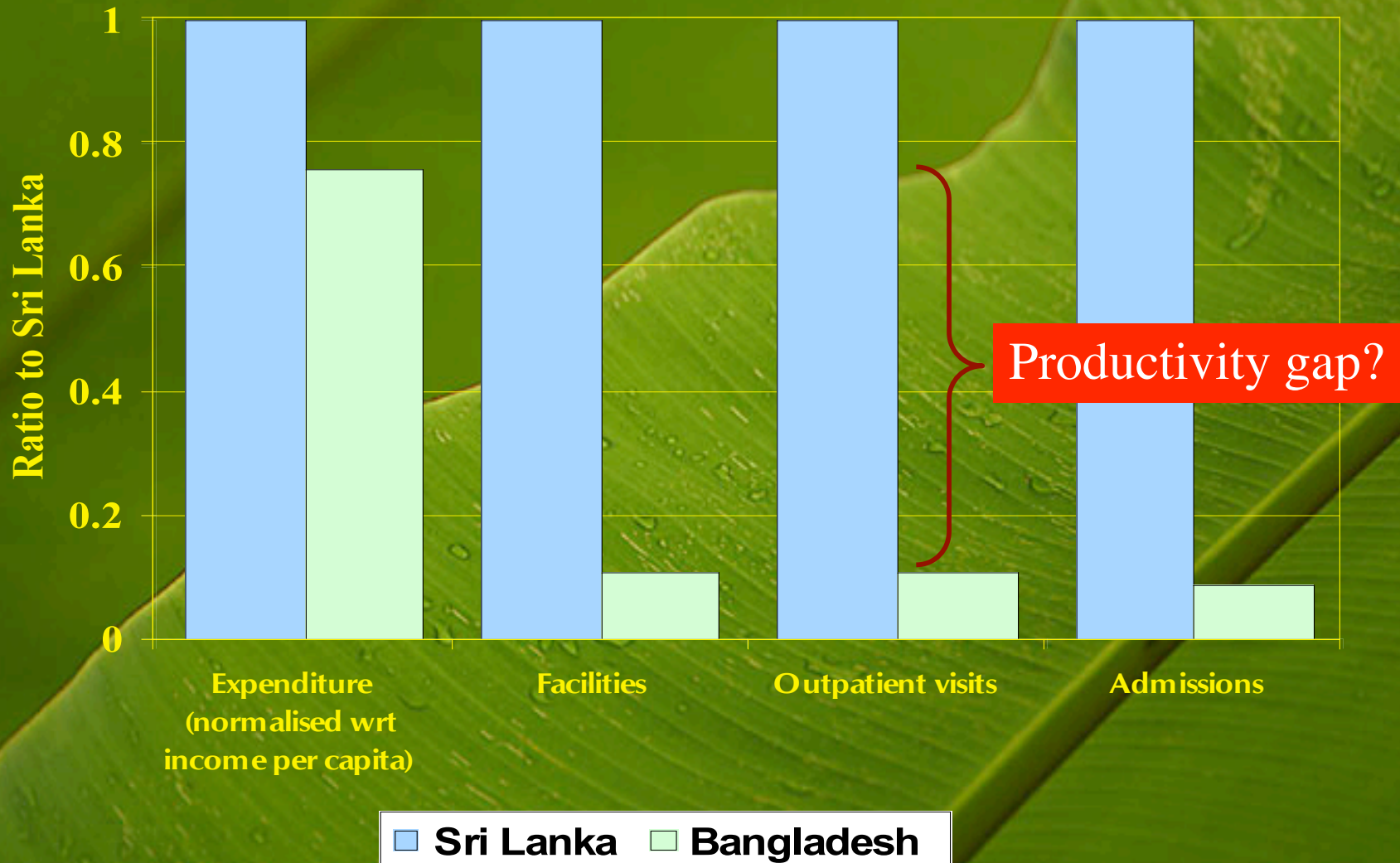
Indicator	Bangladesh	Sri Lanka
<b>Type 1 Facilities</b>		
Beds (mean)	31	47
Admissions (mean)	2,301	3,884
ALOS	4	3
Operating cost (US\$ '000s)	143	78
Expenditure per million capita (multiple of GDP per capita)	1,345	1,096
<b>Type 2 Facilities</b>		
Beds (mean)	90	190
Admissions (mean)	7,656	14,633
ALOS	5	3
Operating cost (US\$ '000s)	186	363
Expenditure per million capita (multiple of GDP per capita)	265	1,012



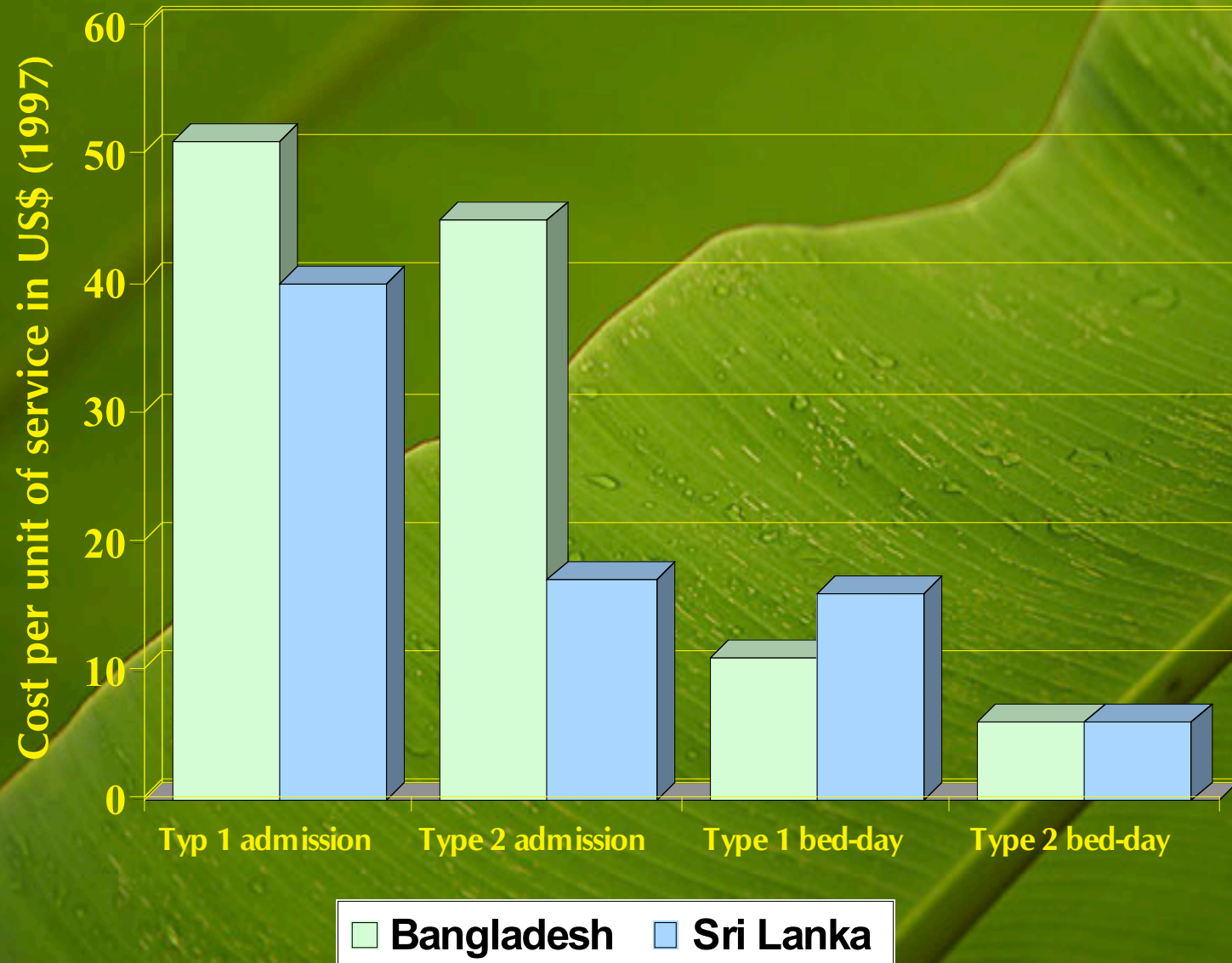
# Provision density comparison



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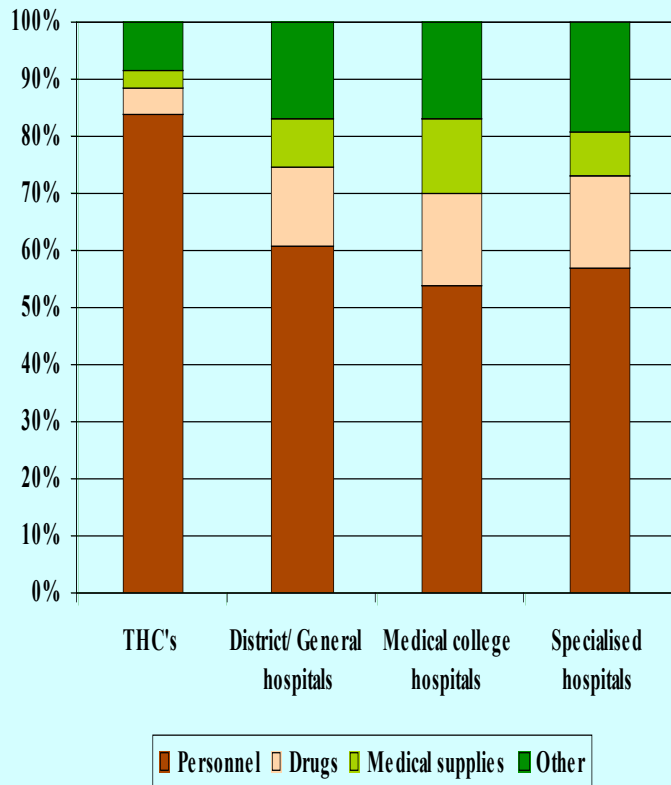


# Recurrent unit cost comparison

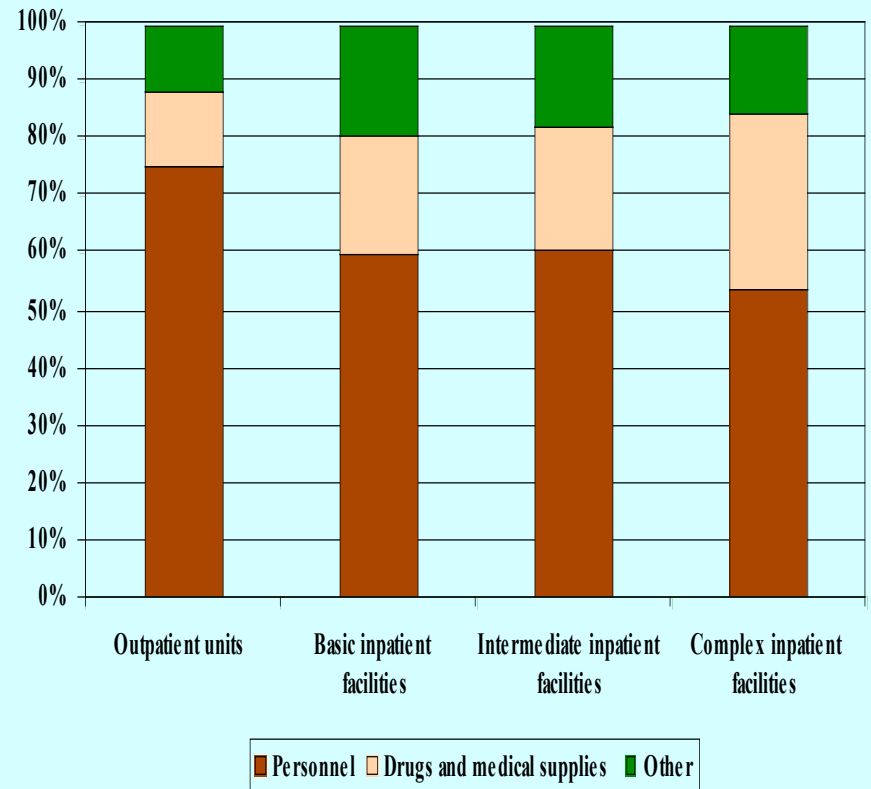


# Input mix comparison (I)

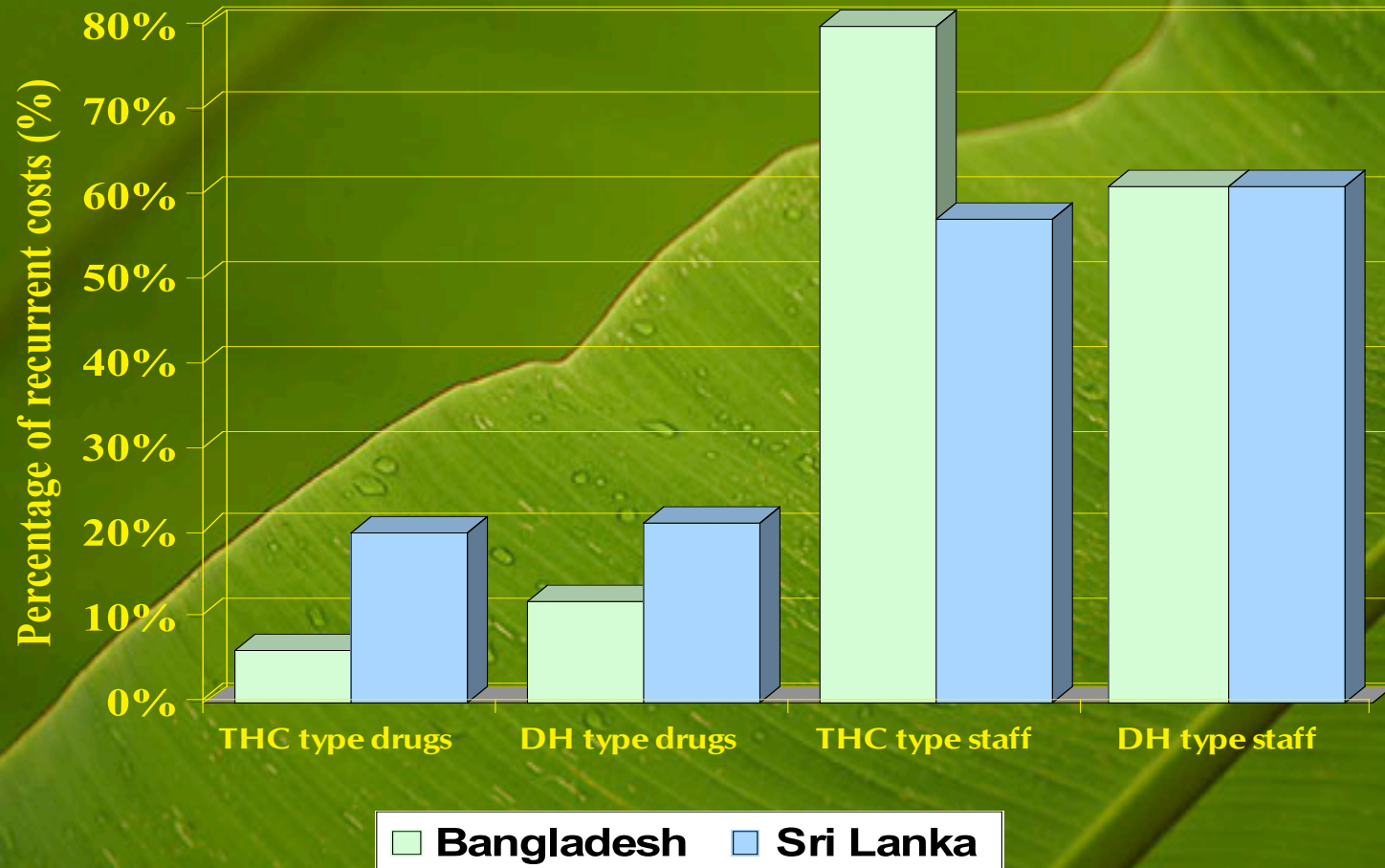
Distribution of total recurrent costs by category of costs



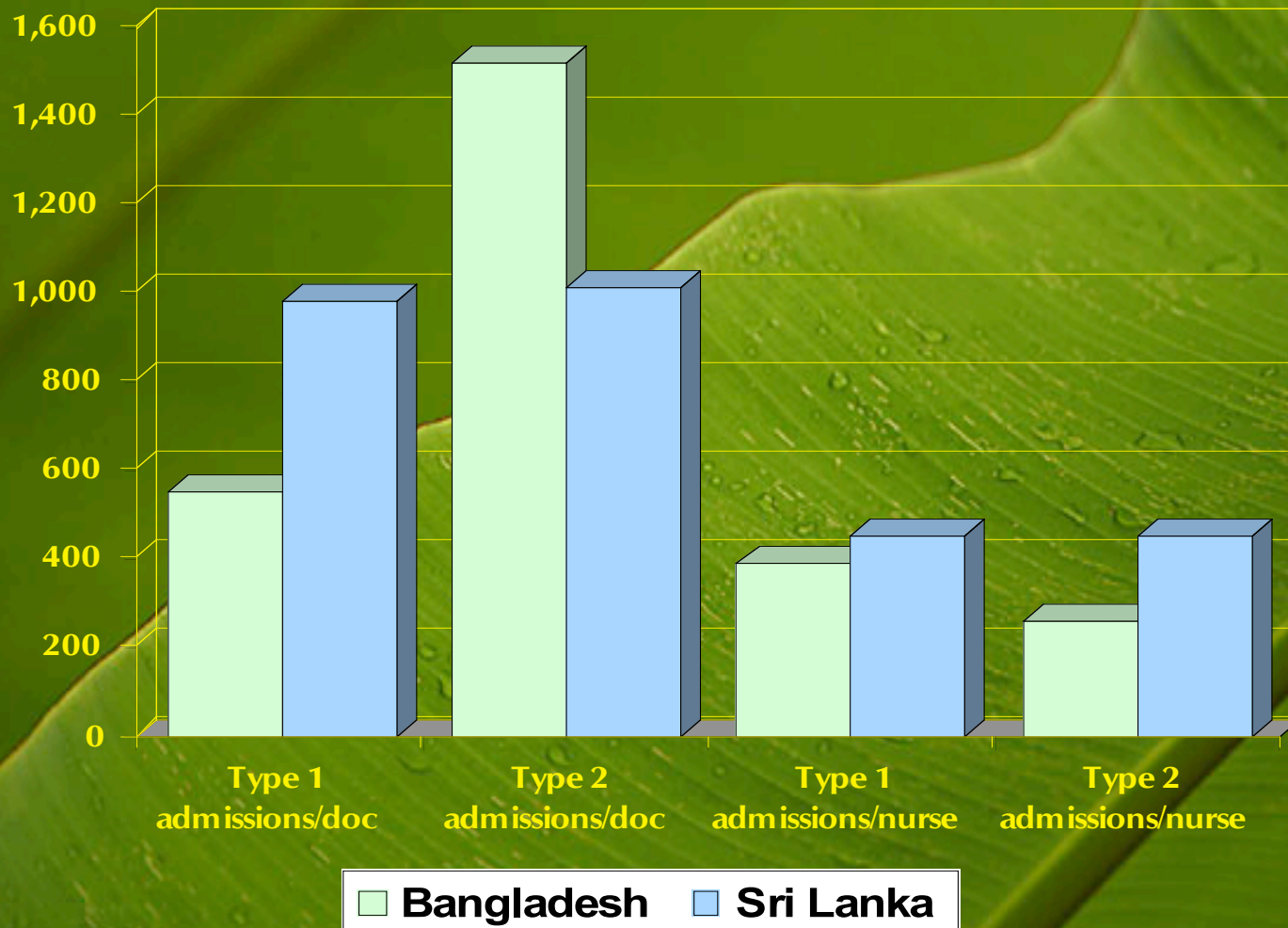
Distribution of total recurrent costs by category of costs



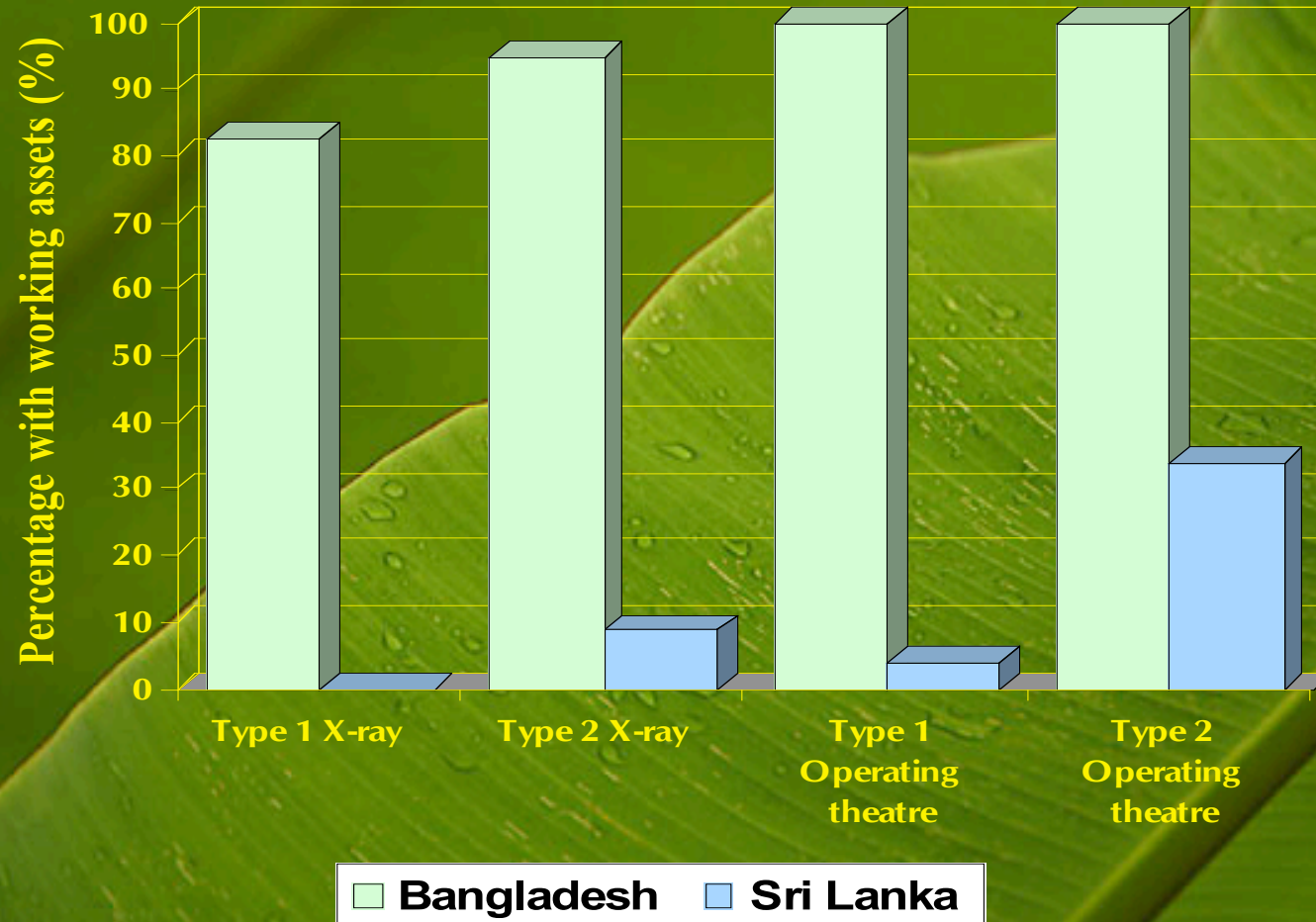
# Input mix comparison (II)



# Staff productivity comparison



# Facility resources comparison



# Thoughts on Bangladesh productivity gap

- Too few facilities
- Thana health complexes over-staffed and over-capital/technology intensive or too few beds - should be expanded?
- Inefficient staff mix (high non-medical/nursing personnel)
- Inefficient input mix (low drugs)
- Inefficient network composition - why?
- Overall lower staff productivity in Bangladesh - why?



# Discussion points

- Are cross-country comparisons useful?
- Why such little interest?
  - By researchers
  - By policy makers
- What explanations exist for Bangladesh?
- Why particular distributions of facilities?
- Why differences in staff productivity?

# Acknowledgements

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