

# Cost-analysis and costing

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Strategic Impact  
Evaluation Fund

## Question

What kinds of programs should we scale up?

- A. Those with the highest measured impact
- B. Those that fit within a given budget

# Goals

1. Possible analyses once costs are measured
2. Measuring costs

# Cost-analysis

## Types of cost analysis

- Cost-benefit analysis (CBA)
- Cost-effectiveness analysis (CEA)

# Perspective of cost analysis

## Implementer

- Government
- NGO

## Social

- Client inputs
- Positive and negative spillovers

# Cost-benefit analysis

- Comparison of all benefits to all costs of a program.
- A ratio of monetized benefits to monetized costs.

# School vouchers for private schools in Colombia

## Costs of program

Government:  $\$24 = \$74 \text{ (voucher)} - \$50 \text{ (reduced public school costs)}$

Households:  $\$19 = \$52 \text{ (additional school fees)} + \$41 \text{ (reduced earnings)} - \$74 \text{ (voucher)}$

## Benefits of program

*Increased grade completion: 0.12-0.16*

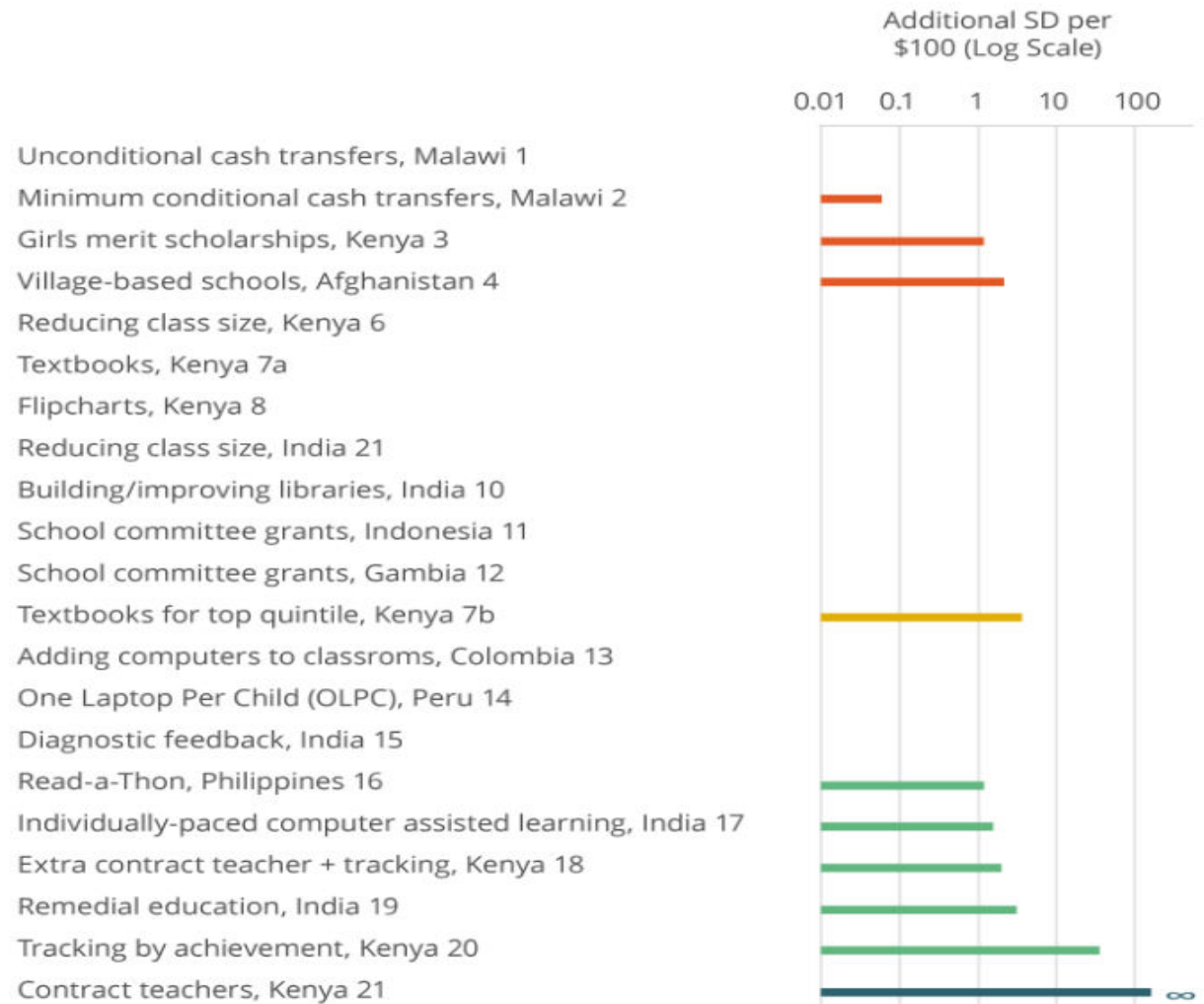
*Translation into wages: \$36/year*



# Cost-effectiveness analysis

- A comparison of the impacts of various programs for a given cost incurred using a single outcome measure.
- A simple ratio of outcome units achieved per dollar spent

# Cost-effectiveness analysis

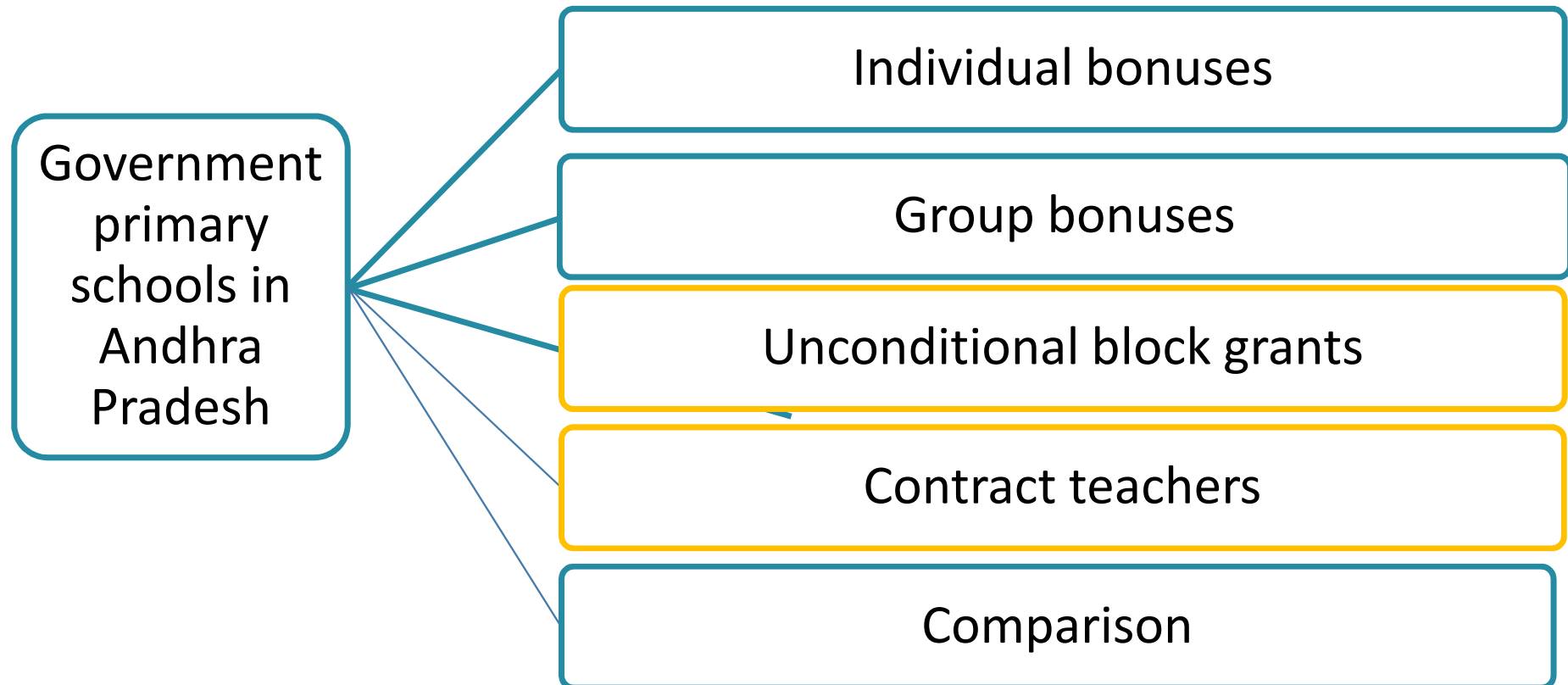


Method	Advantages	Disadvantages
Cost-benefit analysis	<ul style="list-style-type: none"> <li>• Widely used and understood</li> <li>• Judges worth of a single intervention</li> <li>• Can compare interventions within and across sectors</li> <li>• Can compare interventions with multiple outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot deal with non-monetary outcomes</li> <li>• Conversion to benefits requires assumptions</li> </ul>
Cost-effectiveness analysis	<ul style="list-style-type: none"> <li>• No need to make assumptions on translation of benefits</li> <li>• Simple</li> </ul>	<ul style="list-style-type: none"> <li>• Can only compare interventions within a sector</li> <li>• Cannot deal with multiple outcomes</li> </ul>

## “Built-in” cost-effectiveness analysis

- Test two different interventions that cost the same
- **Example:** Teacher performance pay in Rwanda
  - Expected bonus equated to additional social security compensation set aside for teachers

# Teacher performance pay in India



# Measuring costs

## Question

Can't we just use our budget?

# Measuring costs

1. Opportunity costs
2. “Ingredients” method of measuring costs



## Ingredients method

1. Exhaustively identify all ingredients
2. Value ingredients
3. Adjust costs



# 1. List all ingredients

- Personnel
  - Facilities
  - Equipment
  - Materials
  - Administration
  - Overhead
  - And.....
- Frequently overlooked categories
    - Full costs of personnel (salary, fringe)
    - Infrastructure and durable ingredients
    - “Free” ingredients

## 2. Valuing ingredients

- Identify number of units used of each ingredient
- Assign a price for each ingredient
- **Challenge:** Estimating the right proportion for ingredients used for multiple tasks



## The elusive costs of labor

- Recall bias
- Multiple tasks



## Parent training via health workers in Bangladesh

- Costs of health worker training and materials not problematic
- Costs of workers and facilities?



### 3. Adjusting costs

- Time discounting
  - We prefer to delay costs and receive benefits sooner. But often the timing of this is reversed.
  - Example: Present value of \$100 in 1 year could be \$95.24.

### 3. Adjusting costs

- Price inflation
- Scale of the program (+/-)
- Development vs. routine implementation



# Bank loans for private schools in Pakistan

- Variable costs to government: \$0
- Fixed costs of set-up: ???
  - Discussions to change regulations
  - Negotiations with bank





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THANK YOU