

Cost-Effectiveness Analysis

Lani Trenouth
Research Officer
ACF International
March 2015



REFANI

What is Cost-Effectiveness Analysis?

- Economic analysis to compare the relative total costs and effects of two or more interventions
- Typically expressed as a ratio - total programme resources divided by the “effectiveness” or outcome achieved
- Output / direct deliverables >>> Cost efficiency
 - e.g. cost per beneficiary reached
- Outcome / changes in wellbeing >>> Cost effectiveness
 - e.g. cost per case of diarrhea averted

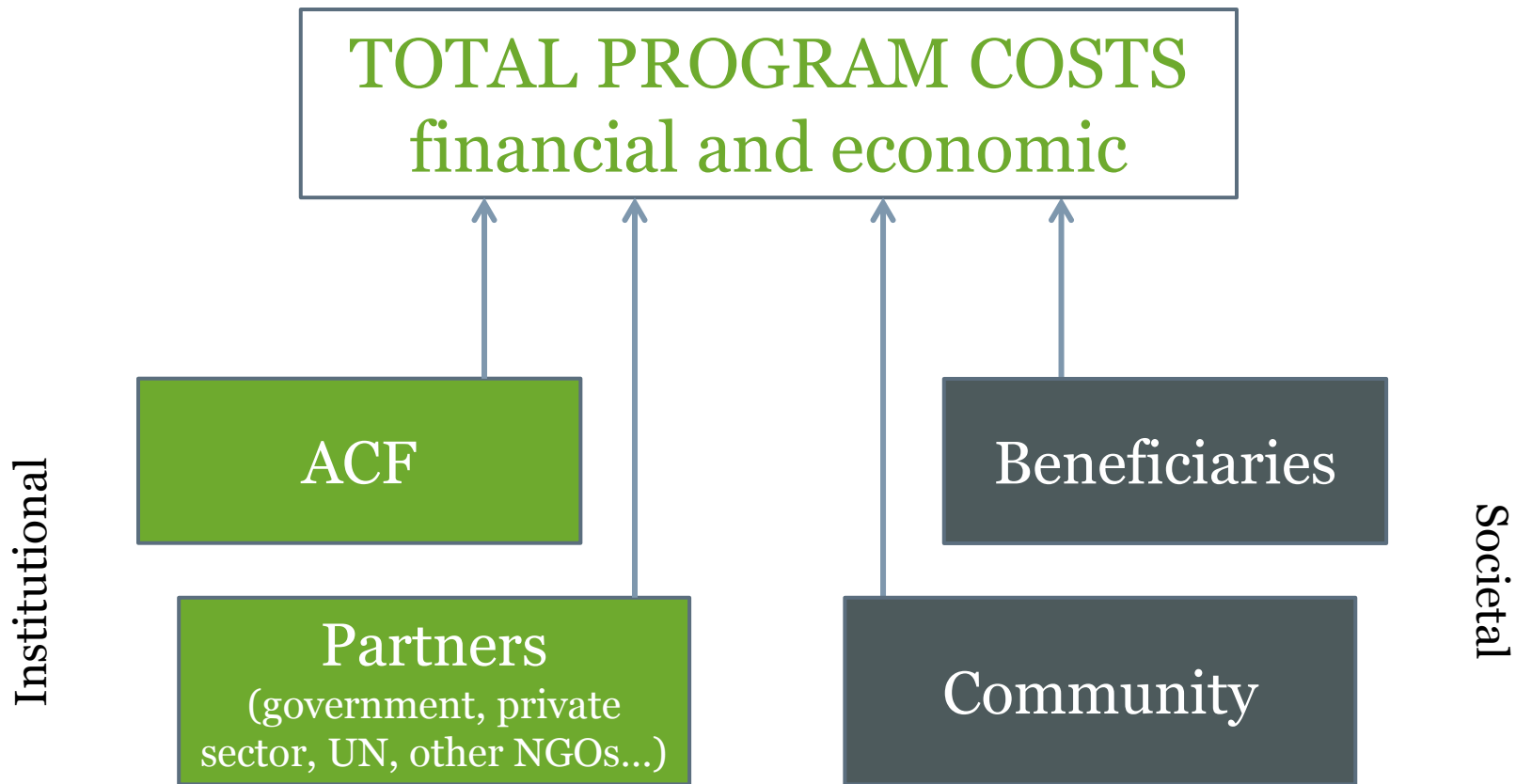
Why Cost-Effectiveness Analysis?

- Provide evidence to inform policy decisions regarding competing demands for limited resources
- To inform program management, guidance for decision-making for resource allocation, expected costs
- Move beyond cost efficiency; cost efficient \neq cost effective
- To fill the gap of existing knowledge on cost-effectiveness and support the definition of benchmarks for food assistance cost-effectiveness

Existing Evidence

- Extensively used in the field of health care; since mid-1960s
- Large evidence gap on cost-effectiveness of food assistance
- More evidence on cost-efficiency, e.g. cost per BNF, cost-transfer ratio, etc.
 - CaLP /OPM 2014 Guide to calculating cost of delivering cash transfers in humanitarian emergencies – Kenya and Somalia
 - Gentilini 2014 Our Daily Bread: What is the evidence on Comparing Cash versus Food Transfers?

Analytical Perspective



CEA Inputs

Institutional costs

- Staff salary & time use
- Supplies, vehicles, rent & utilities
- Program inputs (value of cash and vouchers)

Societal costs

- Beneficiary wage loss
- Beneficiary transport fees
- Community volunteer time
- Community in-kind donations (e.g. venue for distributions)

costs

effects

children recovered

cases averted

Methods - Data Sources

- Accounting data
- Staff interviews with implementing organisations and partners
- Focus group discussions with beneficiaries
- Key informant interviews with community leaders, vendors, service providers

CEA Outputs

- Average cost-effectiveness ratio

$$\frac{\text{costs}}{\text{effects}}$$

- Incremental cost-effectiveness ratio

$$\frac{\text{costs p1} - \text{costs p2}}{\text{effects p1} - \text{effects p2}}$$

- Cost structure over time
- Cost structure across “cost centres”
- Sensitivity analysis

REFANI CEA Objective and Outputs

- Complement nutritional impact studies, adding value-for-impact evidence
- Primary output: comparative CEA of C&V food assistance in prevention of acute malnutrition
- Secondary outputs: derive cost per beneficiary, cost per activity, cost-transfer ratios, proportion of cost centres, cost drivers

PAKISTAN STUDY COSTING FRAMEWORK

Intervention

Background programme

✓ Analysis

Costs

✓ ICER

- ✓ ACER
- ✓ Cost per major activity
- ✓ Cost per beneficiary
- ✓ Cost-transfer ratio
- ✓ Cost per case of acute malnutrition prevented

6 month distribution

Cash Transfer

1500
Rs/month

- ✓ ACER
- ✓ Cost per major activity
- ✓ Cost per beneficiary
- ✓ Cost-transfer ratio
- ✓ Cost per case of acute malnutrition prevented

6 month distribution

Double Cash Transfer

3000
Rs/month

- ✓ ACER
- ✓ Cost per major activity
- ✓ Cost per beneficiary
- ✓ Cost-transfer ratio
- ✓ Cost per case of acute malnutrition prevented

6 month distribution

Fresh Food Voucher

1500
Rs/month

Intervention-specific resources for each arm:

- Proportional % of shared costs
- Staff salary, time
- Materials
- Transfer costs
- Support costs
- Partner costs
- Opportunity cost of beneficiary time
- Beneficiary expenditures
- Etc.

Underlying EU-funded "Women and children/Infants Improved Nutrition in Sindh" (WINS) programme.
Common complementary program components - nutrition, WASH, food security

Assume same background costs / components for all villages of each arm

Thank you

Lani Trenouth
Research Officer
ACF International
March 2015

ltrenouth@actionagainsthunger.org



REFANI