Age 21 Benefit-Cost Analysis of the Chicago Child-Parent Centers

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Benefit-Cost Analysis
Benefit Categories

• School Remedial Services
  – Reduced Costs of Special Education Services
  – Reduced Expenditures for Extra Schooling for Retained Students

• Child Welfare System
  – Reduced Treatment and Administrative Costs
  – Cost savings to Victims

• Juvenile Court and Treatment Costs
  – Reduced Administrative Costs
  – Reduced Costs of Juvenile Treatment
  – Savings to Crime Victims
Benefit Categories (cont.)

- Adult Courts and Treatments
  - Reduced Administrative Costs
  - Reduced Costs of Treatment
  - Savings to Crime Victims
- Life Time Earnings Capacity (Projected from HS Completion)
  - Increased Earnings Through Age 65
  - Increased Tax Revenues to Governments

Program Costs Per Participant vs. Selected Yearly Costs (1998)

- Preschool ($6,692) vs. Special education, $7,791
- School-age ($2,981) vs. Juvenile institution, $32,237
- Extended ($10,000) vs. Child welfare services, $9,492
Cost-Benefit Analysis

Overview

- Benefits to Participants, the Public, Society, and Government Savings

- Translating Estimated Effect Sizes to Monetary Values

Procedures and Examples

1. Define benefit categories
   (Example: Reduced special ed services)

2. Estimate the program effect
   (Example: .70 fewer years in special ed)

3. Estimate program benefits in $$$
   (Example: $7,285 for one year of services)
Procedures and Examples (cont.)

4. Convert to 1998 dollars
(Example: $7,791 (i.e., adjust for inflation))

5. Estimate benefit at the time of program entry
(age 3) using an annual discount rate of 3%
(Example: $5,971)

This is the Present Value of Benefits in 1998 dollars.
The Program Economic Benefit Per Participant is
.7 (5,971) = $4,180.

Benefits and Costs for Three Measures
of CPC Program Participation

![Bar chart showing estimated benefits and costs for preschool program participation.
Sources include:
- Child care: $1,657
- Abuse and neglect: $770
- Crime victims: $6,127
- Justice system: $7,130
- College tuition: $557
- Taxes on earnings: $7,243
- Lifetime earnings: $692
- Grade retention: $4,180
- Special education
- Program costs
- Abuse and neglect: $6,692

Present Value in Thousands (1998 $ discounted at 3%)
Benefits and Costs for Three Measures of CPC Program Participation

Estimated Benefits and Costs of the School-Age Program

Sources of Savings or Costs

<table>
<thead>
<tr>
<th>Program</th>
<th>Present Value in Thousands (1998 $ discounted at 3 %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child care</td>
<td>$0</td>
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<tr>
<td>Abuse and neglect</td>
<td>$204</td>
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<tr>
<td>Crime victims</td>
<td>$431</td>
</tr>
<tr>
<td>Justice system</td>
<td>$0</td>
</tr>
<tr>
<td>College tuition</td>
<td>$20</td>
</tr>
<tr>
<td>Taxes on earnings</td>
<td>$259</td>
</tr>
<tr>
<td>Lifetime earnings</td>
<td>$732</td>
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<tr>
<td>Grade retention</td>
<td>$472</td>
</tr>
<tr>
<td>Special education</td>
<td>$2,866</td>
</tr>
<tr>
<td>Total</td>
<td>$2,981</td>
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</tbody>
</table>

Benefits and Costs for Three Measures of CPC Program Participation

Estimated Benefits and Costs for the Extended Program

Sources of Savings or Costs

<table>
<thead>
<tr>
<th>Program</th>
<th>Present Value in Thousands (1998 $ discounted at 3 %)</th>
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</thead>
<tbody>
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<td>Child care</td>
<td>$1,646</td>
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<tr>
<td>Abuse and neglect</td>
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<td>Crime victims</td>
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<tr>
<td>Justice system</td>
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<tr>
<td>College tuition</td>
<td>$234</td>
</tr>
<tr>
<td>Taxes on earnings</td>
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<tr>
<td>Lifetime earnings</td>
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<tr>
<td>Grade retention</td>
<td>$467</td>
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<tr>
<td>Special education</td>
<td>$4,001</td>
</tr>
<tr>
<td>Total</td>
<td>-$4,057</td>
</tr>
</tbody>
</table>
Sources of Societal Savings for CPC Preschool and CPC Extended Participation

Sources of Societal Savings for the CPC Preschool Program

- Program Participants: 46%
- Government Savings: 41%
- Crime Victims: 13%

Benefit to Cost Ratios for 3 Measures of Participation

- Preschool School-Age Extended
- Total Benefit: 7.14, 3.85, 6.11
- Public Benefit: 1.66, 1.42, 3.60
Sources of Societal Savings for CPC
Preschool and CPC Extended Participation

Sources of Societal Savings for the CPC Extended Program

- Program Participants: 41%
- Government Savings: 44%
- Crime Victims: 15%

Sensitivity of Estimated Total Benefits and Cost of the Preschool Program

1998 Present Value Dollars Per Child

- Total Benefits
- Preschool Cost

Discount Rate
Sensitivity of Estimated General Public Benefits (Taxpayers and Crime Victims) and Cost of the Preschool Program

<table>
<thead>
<tr>
<th>Discount Rate</th>
<th>General Public</th>
<th>Preschool Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10000</td>
<td>10000</td>
</tr>
<tr>
<td>1</td>
<td>7000</td>
<td>7000</td>
</tr>
<tr>
<td>2</td>
<td>4000</td>
<td>4000</td>
</tr>
<tr>
<td>3</td>
<td>2000</td>
<td>2000</td>
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<tr>
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<tr>
<td>6</td>
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<td>250</td>
</tr>
<tr>
<td>7</td>
<td>125</td>
<td>125</td>
</tr>
</tbody>
</table>

1998 Present Value Dollars Per Child

Notes: 1) High/Scope Perry Preschool cost benefit amounts are in 1992 dollars; discounted at 3%. Benefits include averted intangible crime victim costs. 2) Chicago Child Parent Center (CPC) cost benefit amounts are in 1998 dollars; discounted at 3%. 3) Elmira PEIP cost benefit amounts are in 1996 dollars; discounted at 4%.

Benefit to Cost Ratio for 3 Intervention Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Present Value of Benefits Per Dollar Invested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Benefit</td>
<td>7.14, 5.06, 3.65</td>
</tr>
<tr>
<td>Public Benefit</td>
<td>7.16, 4.06, 3.65</td>
</tr>
</tbody>
</table>

Notes: 1) High/Scope Perry Preschool cost benefit amounts are in 1992 dollars; discounted at 3%. Benefits include averted intangible crime victim costs. 2) Chicago Child Parent Center (CPC) cost benefit amounts are in 1998 dollars; discounted at 3%. 3) Elmira PEIP cost benefit amounts are in 1996 dollars; discounted at 4%.
Implications of Chicago Study

• Early childhood programs are among the most effective preventive interventions. Evidence of benefit-cost analysis suggests the long-term payoff of such approaches.

• Length of program participation can matter as much as timing. Services should better reflect this principle.

• Implement intensive parent programs through staffed parent-resource rooms and emphasis on personal development and school participation.

Implications of Chicago Study (cont.)

• Focus enrichment on school readiness, especially language and literacy skills through relatively structured, activity-based approaches.

• Focus school-age programs on school organization and instructional resources through such elements as reduced class sizes and child-teacher ratios, and instructional coordination.

• Study the strengths and limitations of universal access to early care and education programs. Quality and effectiveness will depend on success in
  A. Coordinating services
  B. Recruiting and keeping well-trained staff
  C. Tailoring services to the needs of families.
For more information about the Chicago Longitudinal Study, contact:

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