Using Early Care and Education Cost Modeling to Inform Policy

Alliance for Early Success
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Opportunities Exchange
What is Cost Modeling?

• A tool to estimate (model) the likely cost of providing early care and education services at varying levels of quality
  • Excel spreadsheets or online tools
  • Models a ‘reasonable’ budget given standards; does not reflect the actual budget of any specific center

• Design of the model depends on what you’re trying to measure or learn about, for example:
  • Cost for a service provider to deliver ECE at various QRIS levels
  • Cost for a Shared Service Alliance (provider network) to deliver ECE
  • Cost for a state to provide subsidies or QRIS incentives under various scenarios; can also develop model for infrastructure costs if desired
  • How various revenue sources (HS/EHS, Prek, etc) impact cost
  • Implications of the Iron Triangle (full enrollment & fee collection, rates)
Online Cost Models for ECE

- **PCQC (“Provider Cost of Quality Calculator”)**
  - Web-based platform based on spreadsheets developed by Anne Mitchell (today’s example based on same spreadsheets)
  - Designed to help states and providers understand costs at different levels of quality, and degree of gap between revenues and costs
  - To be launched October 2014: www.ECEQualityCalculator.com

- **CEM (“Cost Estimation Module”)**
  - Online tool designed to help state administrators determine costs of implementing all elements of a QRIS and explore phase-in and scale-up options
  - Can be used to estimate the cost per year of phasing in a QRIS, the cost of certain elements, or the overall cost of a full implemented QRIS.
Using Cost Modeling to Inform Policy

• Several States have used the cost modeling spreadsheets to understand the financial picture of center-based child care.
  • Developed with information from local providers and ECE organizations in the particular state
  • Informed by cost modeling spreadsheets developed by Anne Mitchell
  • Can apply revenues from multiple sources (HS/EHS, PreK, CCDF, etc)

• Model enables advocates to make the case with data and sophisticated fiscal analysis

• Model can also provides some guidance about how to address this challenge
Understanding a Provider’s Bottom Line

Center-focused cost modeling can help answer:
• Given reasonable assumptions, can a center at least break even?
• What is the impact on the bottom line of moving up the quality ladder?
• What are the factors that have a positive, or negative, effect on the bottom line?
  • Revenues
  • Expenses
  • Operating Model (staffing, age mix, family income mix, etc.)
  • Business practices
How the Model Can be Used

- Enables exploration of how various factors can affect profit or loss, e.g.:
  - Increased scale
  - Income mix of families served
  - Enrollment levels
  - Fee collectability
  - Subsidy policy changes
  - Revenue sources, e.g. state-funded PreK or QRIS

- Enables modeling budget for a proposed center or group of centers
Policy Implications: Modeling the Iron Triangle

- Ensure full enrollment – every day, in every classroom
- Collect tuition and fees – in full and on-time
- Revenue covers per-child cost (tuition, fees + 3rd party funding)
State Example: Modeling the Impact of the Iron Triangle

Iron Triangle approach boosts enrollment to 95% & lowers bad debt to 2%
State Example: Impact of Enrollment on Cost-per-child

Annual Cost Per Child
All ages, Star 4 Center in Louisiana
Capacity = 76

<table>
<thead>
<tr>
<th>Enrollment as % of Capacity</th>
<th>Annual Cost Per Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>$11,001</td>
</tr>
<tr>
<td>88%</td>
<td>$9,378</td>
</tr>
<tr>
<td>95%</td>
<td>$8,688</td>
</tr>
</tbody>
</table>
State Example: Per Child Cost by Age and Enrollment

<table>
<thead>
<tr>
<th>Centers Serving Only Infants/Toddlers</th>
<th>Centers Serving Only 3's and 4's</th>
<th>Centers Serving All Ages (0-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$11,553</td>
<td>$9,731</td>
<td>$10,315</td>
</tr>
<tr>
<td>$8,287</td>
<td>$6,981</td>
<td>$8,688</td>
</tr>
</tbody>
</table>

Per-Child Costs

80% Enrollment

95% Enrollment
State Example:
Impact of Increasing Enrollment on Revenue Needed for Higher Stars

<table>
<thead>
<tr>
<th>% Enrollment as percentage of Center Staffed Capacity</th>
<th>Star 1</th>
<th>Star 2</th>
<th>Star 3</th>
<th>Star 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>83%</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>85%</td>
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<td></td>
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<td>87%</td>
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<tr>
<td>97%</td>
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</tr>
</tbody>
</table>

- Star 1
- Star 2
- Star 3
- Star 4

Impact of Increasing Enrollment on Revenue Needed for Higher Stars
State Example: Co-Payments Based on Cost of Care

Family of 4, parents earn minimum wage, annual income $30,160
(New Orleans, LA)

<table>
<thead>
<tr>
<th>Weekly Rates</th>
<th>Infant</th>
<th>3-year-old</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Tuition</td>
<td>$150</td>
<td>$135</td>
<td>$285</td>
</tr>
<tr>
<td>Child care subsidy rate ceiling</td>
<td>$92.50</td>
<td>$87.50</td>
<td>$180.00</td>
</tr>
<tr>
<td>CCAP reimbursement after co-pay</td>
<td>$37.00</td>
<td>$35.00</td>
<td>$72.00</td>
</tr>
<tr>
<td><strong>co-pay for this family = 60% of “cost” of care (e.g. of the state rate ceiling)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cost to parent</td>
<td>$113.00</td>
<td>$100.00</td>
<td>$213.00</td>
</tr>
<tr>
<td>Parent cost as % of weekly income</td>
<td>19.5%</td>
<td>17.2%</td>
<td>36.7%</td>
</tr>
</tbody>
</table>
## State Example: Co-Payments Based on Family Income

**Family of 4, parents earn minimum wage, annual income $30,160** (Charlotte, NC)

<table>
<thead>
<tr>
<th>Weekly Rates</th>
<th>Infant</th>
<th>3-year-old</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Tuition</td>
<td>$200</td>
<td>$175</td>
<td>$375</td>
</tr>
<tr>
<td>Child care subsidy rate ceiling</td>
<td>$185</td>
<td>$168</td>
<td>$353</td>
</tr>
<tr>
<td>CCAP reimbursement after co-pay</td>
<td>$153</td>
<td>$136</td>
<td>$289</td>
</tr>
</tbody>
</table>

*co-pay = 11% of income; $32 wk per child*

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total cost to parent*</td>
<td>$32</td>
<td>$32</td>
<td>$64</td>
</tr>
<tr>
<td>Parent cost as % of weekly income</td>
<td>5.5%</td>
<td>5.5%</td>
<td>11%</td>
</tr>
<tr>
<td>Parent cost if provider charges differential</td>
<td>$47 (8%)</td>
<td>$39 (6.7%)</td>
<td>$86 (14.8%)</td>
</tr>
</tbody>
</table>

*Note: 24% of NC centers elect to collect additional fee to cover difference between subsidy ceiling & private rate; in this case parent fee would be higher*
Potential Challenges

• ECE cost modeling typically demonstrates that a high-quality, market-based program with less than 100 children can rarely break even.
  • But most ECE programs in the US are this small….so how can we explain that more programs haven’t closed?

• ECE cost modeling often reveals that programs at base level of QRIS (e.g. Star 1 or 2) that are fully enrolled do not need higher rates; the largest inequity is with programs that meet higher star levels.
  • This can be a challenging finding from an advocacy perspective

• Can inform rate-setting for programs that tap multiple funding streams
  • IF funders are willing to collaborate on accountability/monitoring
For more information...

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Alliance for Early Childhood Finance
http://www.earlychildhoodfinance.org/

Opportunities Exchange
www.opportunities-exchange.org