



# Technical Challenges in Measuring Regional Economic Impact





## Become part of the economic development debate

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- Define the Child Care Sector as an Industry
  - » # businesses, #employees, # children served, gross receipts
- Calculate its economic impact
  - » Direct effect on spending and employment
  - » Linkage effects
- Identify Economic Development Policy Interventions



# Why Measure the Size of the Child Care Sector?

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- **Establishments** - What strategies can be used to improve business management, promote economies of scale?
- **Workers** - What strategies can be used to improve wages, retention in the field, education qualifications?
- **Children and Parents Served** – What strategies can be used to better match supply with demand by time, location, price?
- **Gross Receipts of the Sector** – How important is child care to the overall economy?



## Data Challenges

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No comprehensive data on the economic size (employment, establishments, sales) of the child care sector.

- Census stopped counting unpaid care work as productive in the early 1990s.
- Child care is best measured by welfare and education frames (subsidy kids, Head Start and preschool enrollment).
- Majority of children in the private pay system<sup>4</sup> are not well counted in government data



# Importance of Comprehensive Data

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The ECE sector suffers from uncoordinated data systems. Education, welfare, and economic data measure different pieces. No data system captures the entire sector.

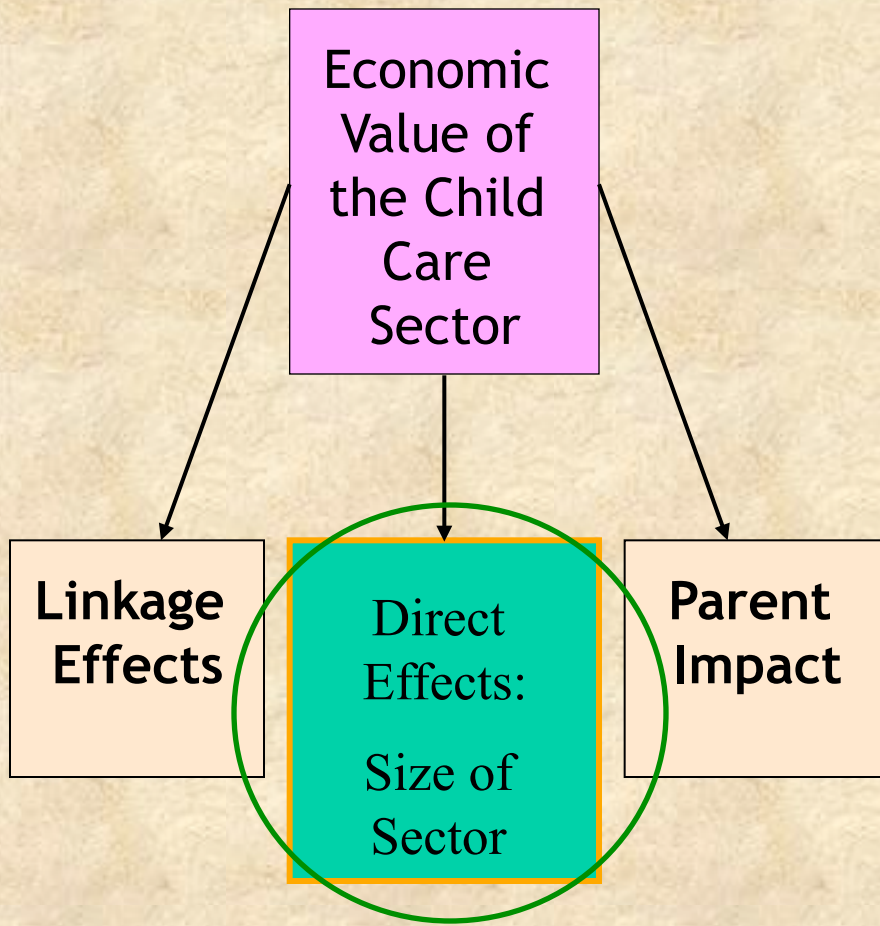
More comprehensive data is a good place to start.

What should we count?

- Suppliers: Providers
- Product: Children Served
- Customers: Parents
- Price, Quality, Wages



# Defining Early Care and Education as an Economic Sector



- Direct Effects
  - » Establishments
  - » Workers
  - » Children/Parents Served
  - » Gross Receipts
- Linkages
  - » Input / Output Analysis
- Parent Effect



# Data Sources

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Importance of triangulation between data sources

## Census Data

- establishments – undercount small establishments
- employment - undercount by a factor of 2 or 3
- wages
- working parents with children – doesn't count use of paid care,
- comparison industries

National Survey Data: Parent use of paid and unpaid care, subsidy utilization

## Tax Data

- » To estimate parents using paid care (Dependent Care Tax Credit) <sup>7</sup>



# Data Sources

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Importance of triangulation between data sources

- Government licensing data –
  - » Establishments - preschool, center care, family care,
  - » Capacity vs enrollment (vacancy rates)
  - » Staffing ratios (to estimate employment)
  - » Government funding (direct subsidies to providers, and overall funding. Subsidy data (kids, parents, informal providers)
- Child Care Agency Survey Data may capture more family providers and license-exempt programs.
- Government market rate survey data – for prices



# Measuring the Size of the Child Care Sector

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In New York State:

**Businesses:** There are 22,000 small businesses providing child care

- State Licensing Data finds 15,000 family providers.
- The IRS reports 49,000 providers who pay taxes (34,000 are not in the licensing system)
- Our policies push providers into the informal sector.

**Employment:**

- County Business Patterns finds 52,940 Employees.
- IRS data finds an additional 49,000 self employed
- Estimates from child staff ratios in the licensed system yield 119,000 workers.

**Importance of triangulation across data sources**



## Who Should be on Your Technical Advisory Committee?

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- People with expertise on
  - » child care survey data
  - » state licensing data
  - » government finance data, including tax
  - » economic data – of the broader economy (comparisons to other sectors)
  - » demographic data (comparison to national or state averages)



# Measuring the Size of the Child Care Sector

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In New York State:

Children Served: 622,000 slots in the licensed system. But there are 3.2 million children in NYS under 13 whose parents work full time.

Parents Served: 750,000 who claim dependent tax care credit. Only a fraction of those who work.

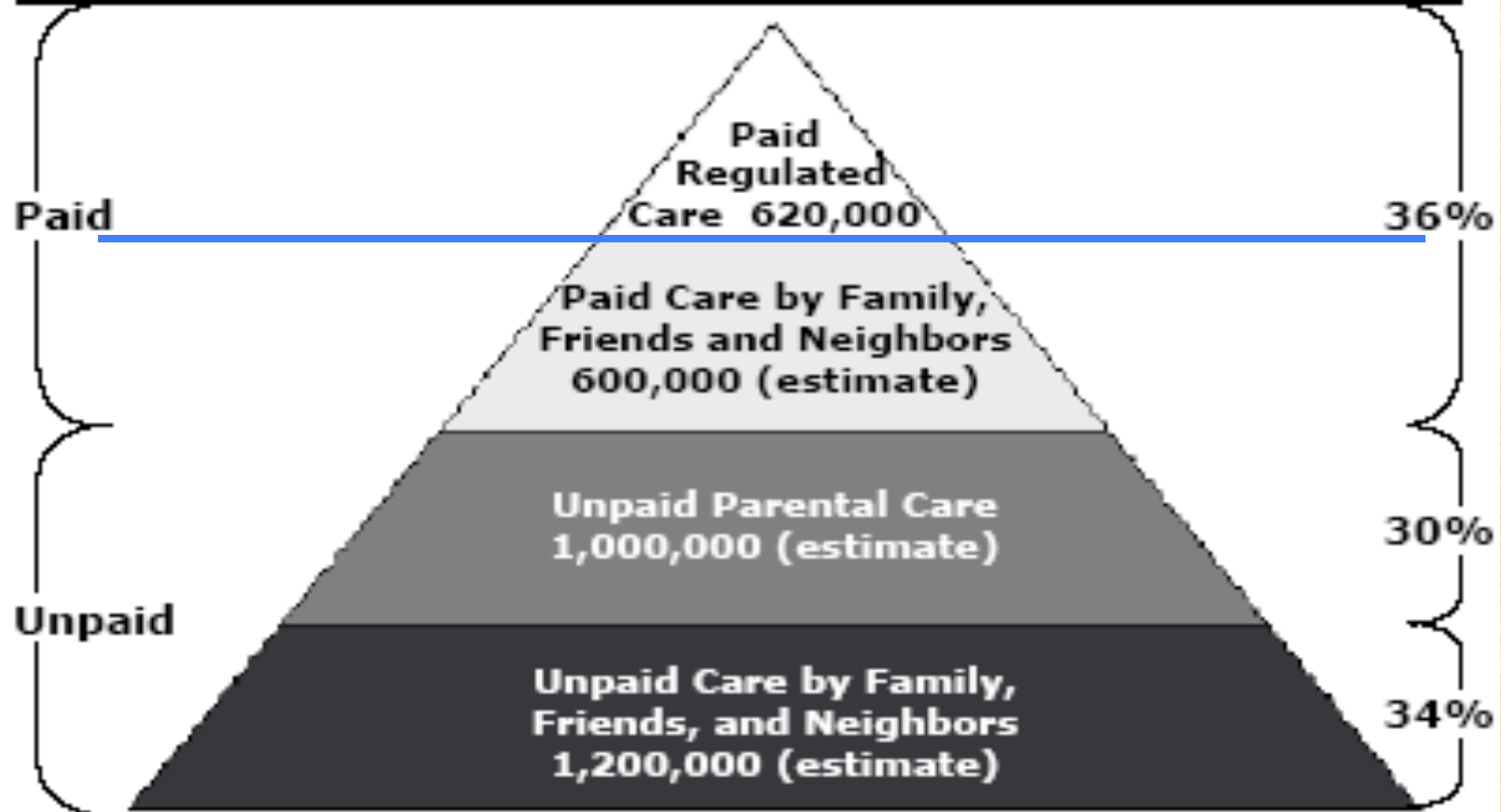
What do we know about demand?

The sector is complex. We need to understand how formal market (paid) care, interacts with informal (paid) care, unpaid family care, and publicly supported preschool.



# Iceberg: Most Child Care Lies Below our View

**Figure 2: Forms of care while parents are at work in NYS**



Estimates based on Urban Institute NSAF survey data reported in NYSCCCC (2004).



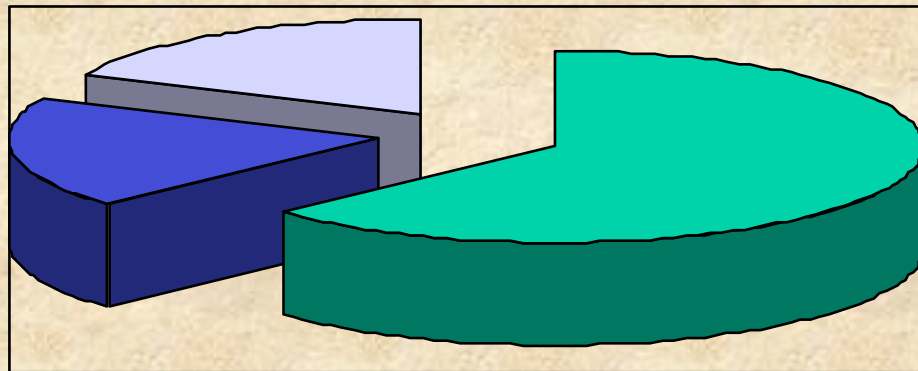
# Price and Demand

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- We need better analysis of supply and demand for child care
  - » Don't over build child care centers
- We need a better sense of what parents want and can afford
  - » Average price of center care in NYS \$9,500
  - » Average wage in growing occupations in NYS \$20,000
  - » Average percent of income parents spend on child care 7-25%



# Gross Receipts of the Child Care Sector: \$4.7 Billion (63% Parent Fees)

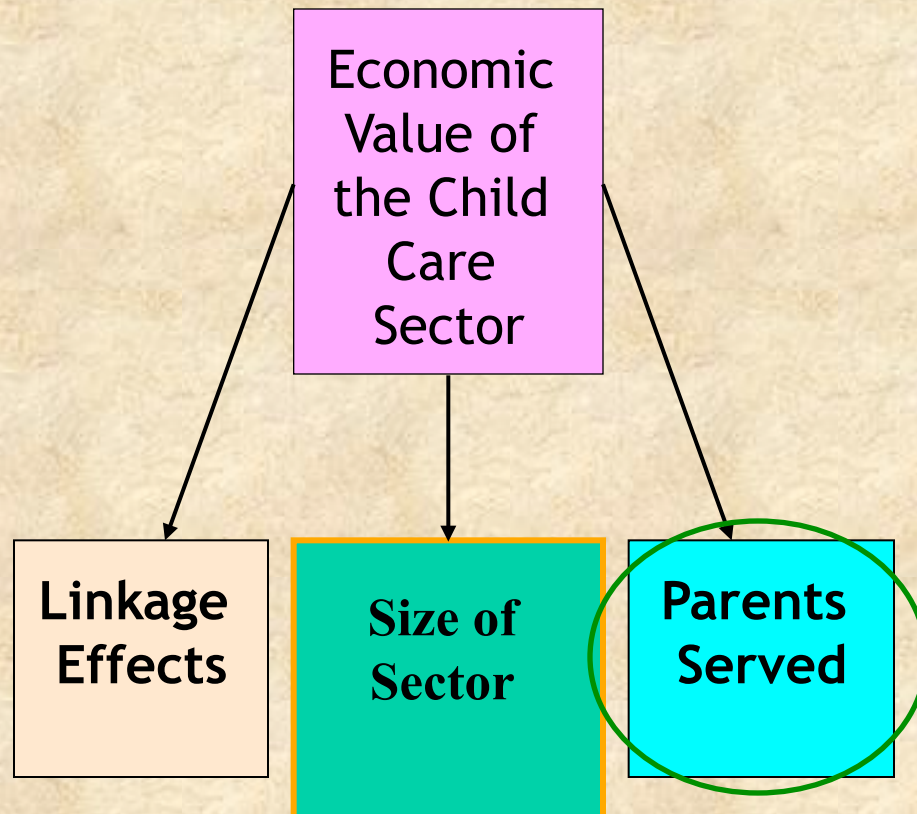


- Parent Tuition Payments
- Government Subsidies to Parents
- Government Investments in Quality and Education (UPK, Head Start)

Most economic data only measure the formal, parent pay, portion of the sector



# Defining Early Care and Education as an Economic Sector



- Size of Sector
  - » Establishments, Workers
  - » Children, Gross Receipts
- Parents Served
  - » # working parents served
- Linkages
  - » Input / Output Analysis



## Measuring the Parental Market for Care

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- No established method to measure this.
- Simply count the number of parents and their median or average wage and STOP.
- Count all working parents with children in care.
  - » To count only the marginal parent (wife) in a two parent household undercounts parents served
- Do not attribute parent labor productivity to child care. Only a small portion of parent productivity can be attributed to quality child care.
  - » Do not run a multiplier on parent wages.



## Child Care Enables Parents to Work

Number of  
NYS Parents  
using Paid  
Child Care:  
**750,000\***

x

Average  
Wages in  
NYS  
**\$40,658**

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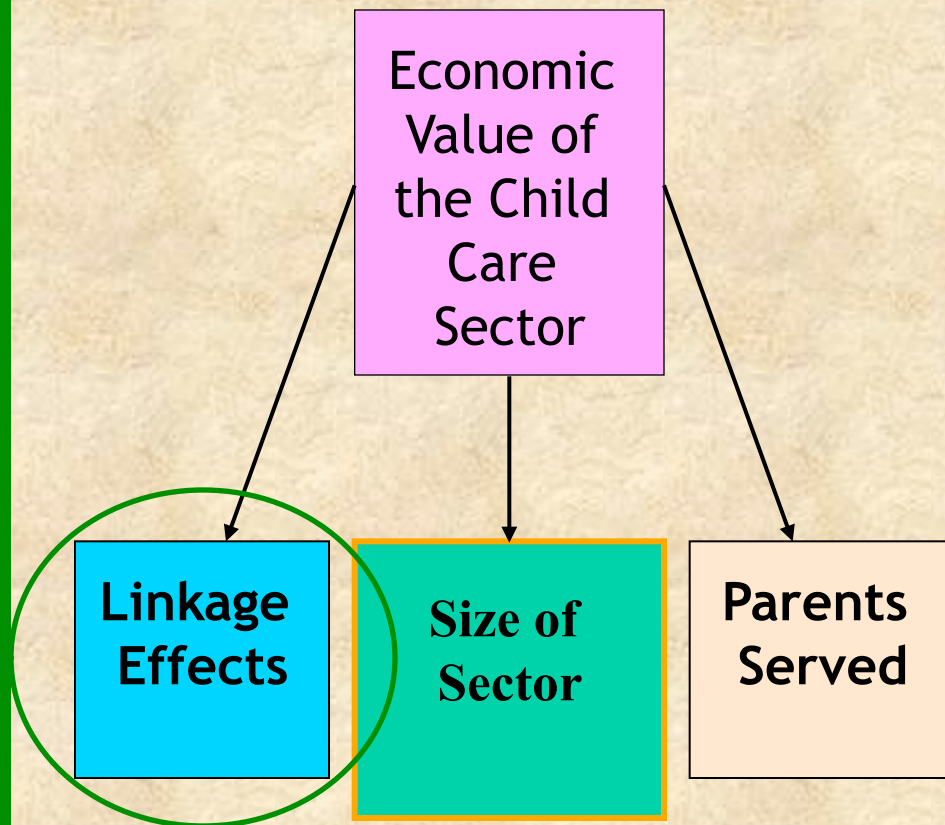
**Parent  
Earnings:  
\$30.5 billion**

This is the market child care serves.

\*Child and Dependent Care Tax Credit data, NYS 2000



# Defining Early Care and Education as an Economic Sector

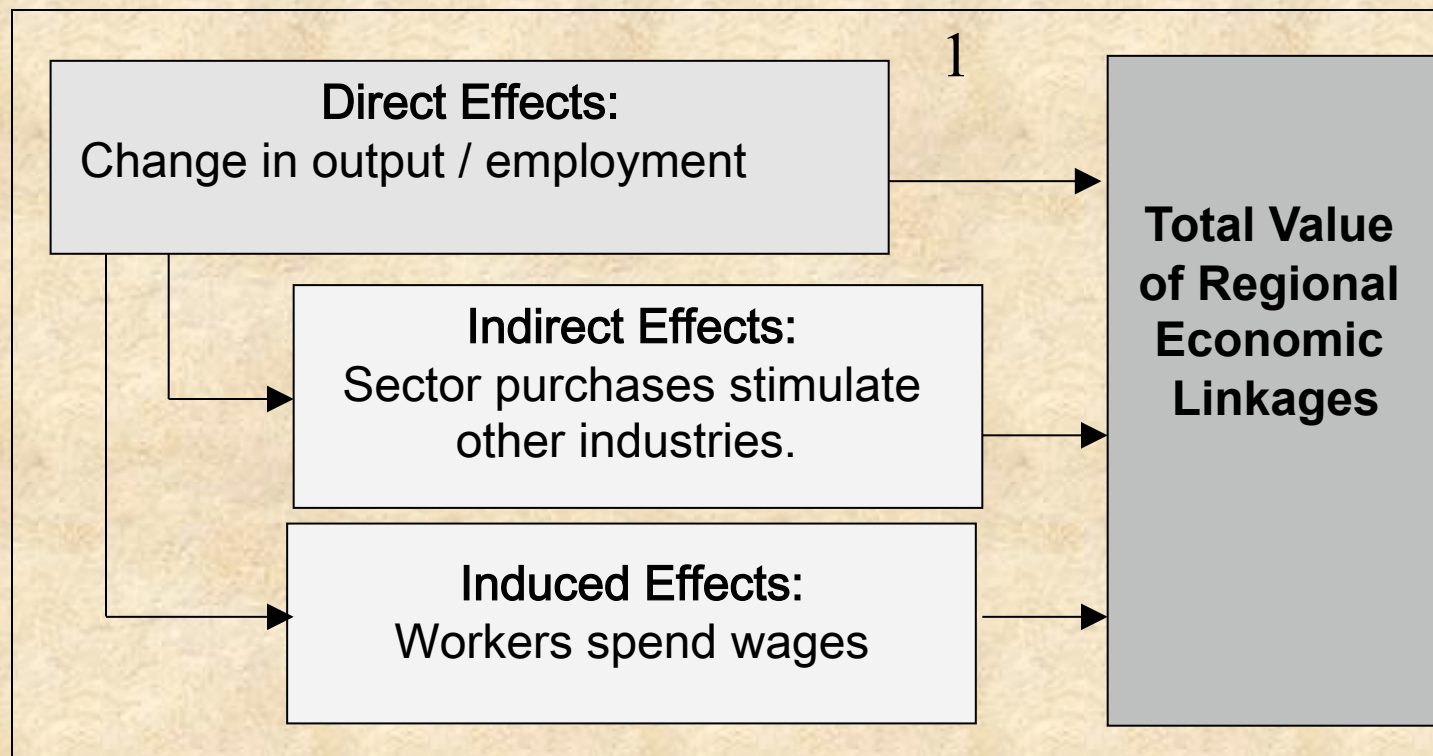


- Size of Sector
  - » Establishments, Workers
  - » Children, Gross Receipts
- Parents Served
- Linkages
  - » Input / Output Analysis
  - » Child Care stimulates other industries



# Understanding Linkage Effects

Input-Output analysis calculates the ripple effects of an industry's spending in the local economy.





## Which Multiplier to Use

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- Type 1 multipliers count the direct and the indirect effect of industry purchases.
  - » This would be the most conservative estimate of child care's economic impact.
  - » Use for local and provincial demand
- Type II multipliers count direct, indirect *and* the induced effects.
  - » Type 11 multipliers can only be used on demand (funding) originating from outside the local economy. (Most child care demand comes from households inside the local economy).  
Use for national funds.



## The Child Care Sector Compared to Other Infrastructure Sectors, 2000

Child Care Output multipliers are similar to education and training, and larger than water, sewer and transportation. But child care does not receive as much public investment.

State	Child care multipliers	Elemen. and Secondary Schools	Job Training and Related Services	Colleges University and Schools	Water Supply and Sewage Systems	Local Interurban Passenger Transit
<b>50-State &amp; D.C. Average</b>	<b>1.91</b>	<b>1.91</b>	<b>1.84</b>	<b>1.84</b>	<b>1.67</b>	<b>1.72</b>

Source: IMPLAN Multipliers 2000 - 50 States plus District of Columbia analysis



## A Note on Multipliers

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- Multipliers only measure backward (purchase) linkages
- Economic Impact based on notion of export demand.
- Child care, as a local service, is most important for its forward (sales) linkages
- Child care's linkage jumps from 20<sup>th</sup> in ranking among similarly sized sectors in NYS to 4<sup>th</sup> when a total linkage measure is used. (Pratt and Kay 2006)



## Linkage and Leverage

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- Kansas used this to argue for maintaining state funding during a budget crisis. Each \$1 of state funding leveraged \$3 of Federal funds, and each \$1 spent on child care generated \$2 of economic activity in the broader economy.
  - »  $\$3 \text{ leverage} * \$2 \text{ linkage} = \$6 \text{ total impact.}$
- Mississippi, after Hurricane Katrina, showed that each child care worker enabled 4-5 parents to return to work, to help restart the economy. The State and private sector (Chevron) helped subsidize restarting the child care sector.