



# The Economics of Early Childhood Education

Wichita, KS

October 8, 2019

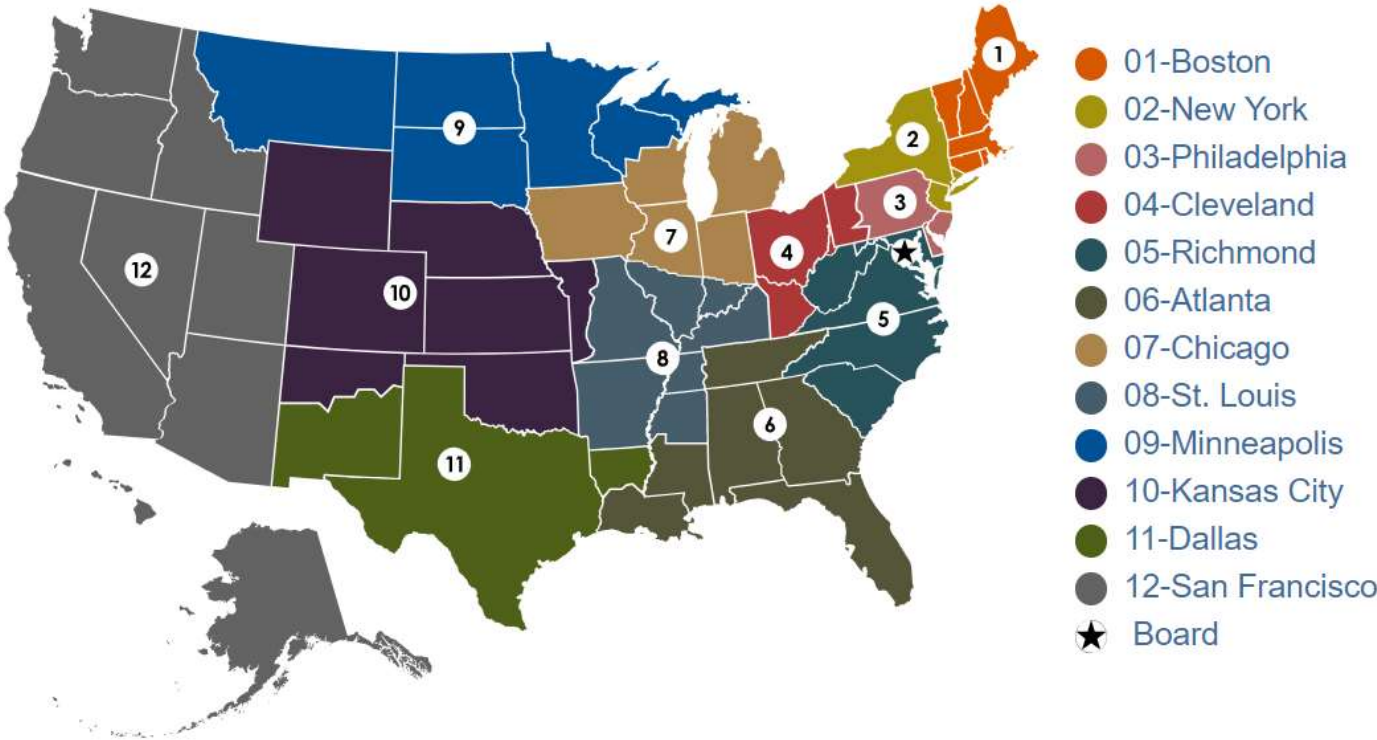


Ben Horowitz  
Community Development, Federal Reserve Bank of Minneapolis\*  
[Benjamin.Horowitz@mpls.frb.org](mailto:Benjamin.Horowitz@mpls.frb.org)

*\*The views expressed here are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.*

# Federal Reserve System

## Overview



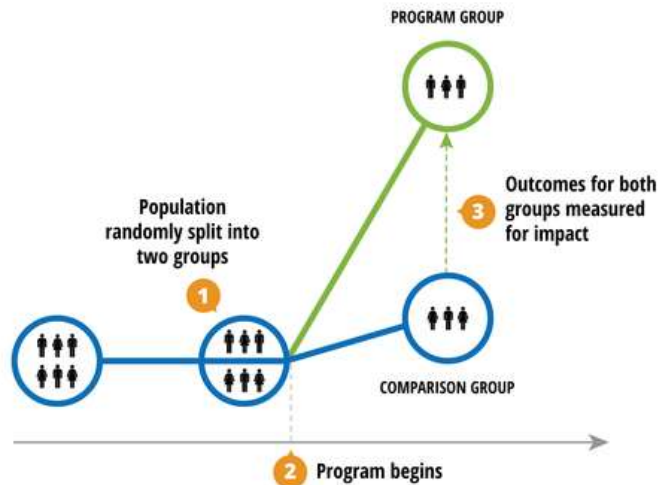
# Today's Roadmap

- The evidence on the return on investment in high-quality programs for families with young children
- An overview of the child care marketplace

# How do we learn about the economic return on investment (ROI) in early childhood programming?

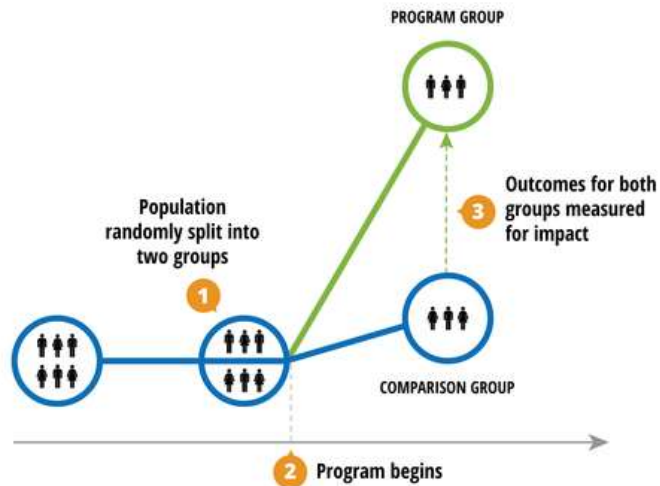
## Randomized Controlled Trials (RCTs)

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# How do we learn about the economic return on investment (ROI) in early childhood programming?

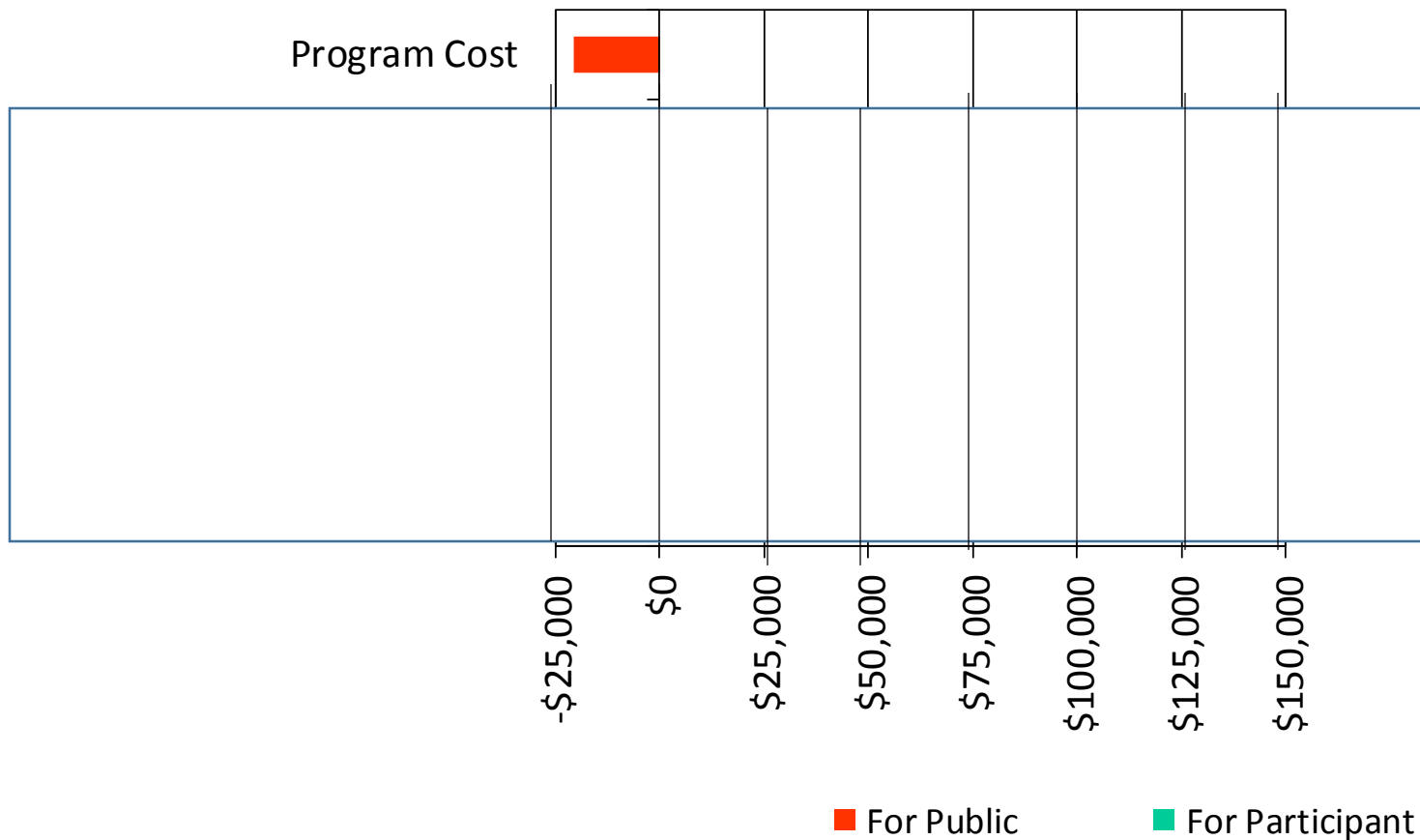
## Randomized Controlled Trials (RCTs)



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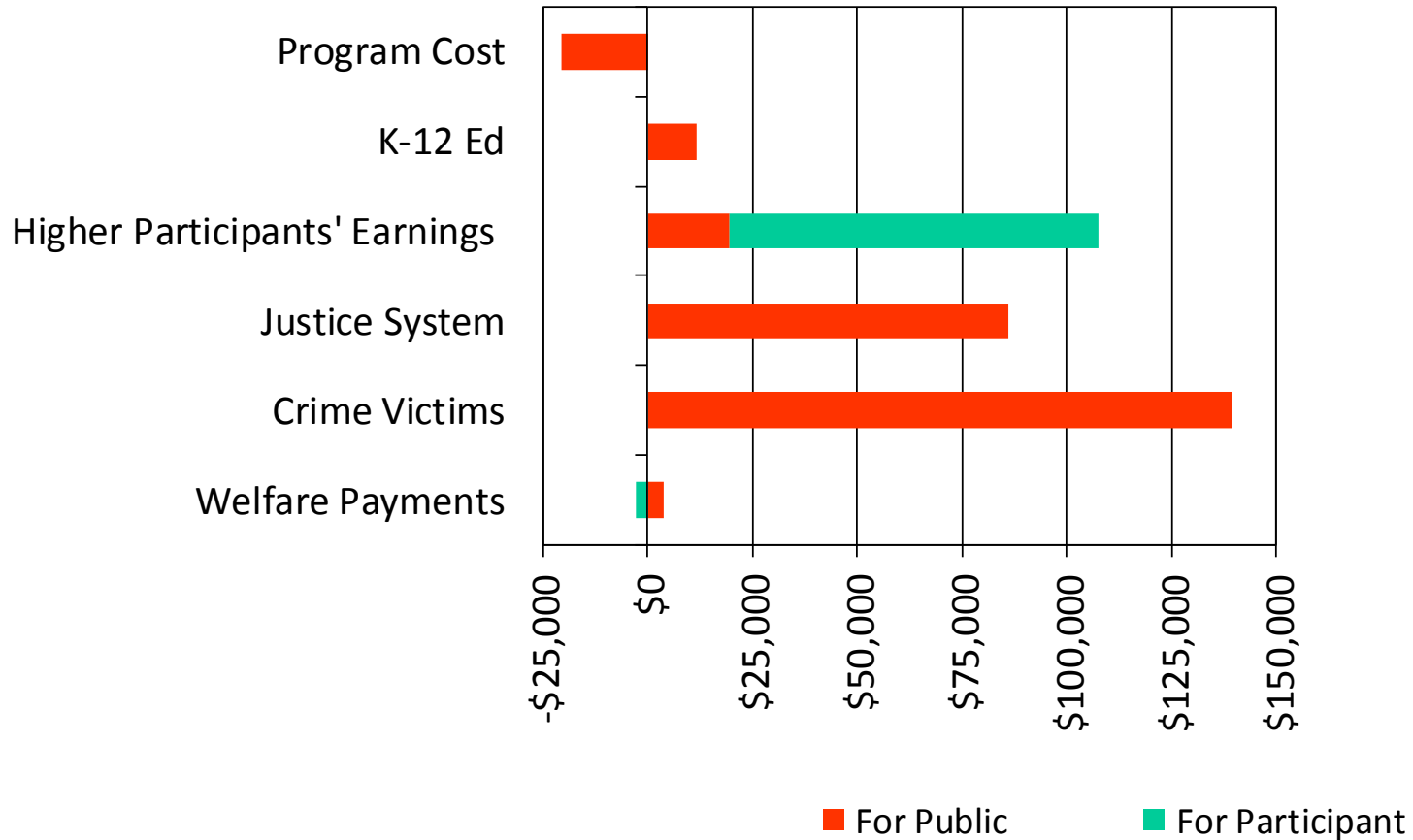


# Perry Preschool—Costs and Benefits Over 62 Years



Source: Schweinhart, et al. (2005)

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Source: Schweinhart, et al. (2005)

# Early childhood development investments

- Home visiting **HV**
- Health & nutrition **HN**
- Early learning programs **ELP**
- Quality Rating and Improvement System
- Parent education
- Child welfare system



# **Fiscal-related benefits prenatal to age 5**

**Health**

**Economic Well-Being**

Sources: Bartick & Reinhold (2010); Devaney, Billheimer, & Schore (2008); Green, et al. (2014); Karoly, et al. (1998); Olds, et al. (1997); Miller (2015); Reynolds, Temple, White, Ou, & Robertson (2011)

# Fiscal-related benefits prenatal to age 5

## Health

- Better maternal and child health HV, HN
- Fewer low-weight births HV, HN
- Fewer emergency room visits HV
- Reduced costs to Medicaid, TANF, and food stamps HV
- Reduced child abuse and neglect HV, ELP

## Economic Well-Being

- Higher maternal earnings and tax revenue HV, ELP
- Lower cash assistance HV
- Lower maternal crime HV

Sources: Bartick & Reinhold (2010); Devaney, Billheimer, & Schore (2008); Green, et al. (2014); Karoly, et al. (1998); Olds, et al. (1997); Miller (2015); Reynolds, Temple, White, Ou, & Robertson (2011)

# **Fiscal-related benefits ages 5 to 17**

## **Education**

## **General Well-Being**

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Muschkin, Ladd, & Dodge (2015); Olds, et al. (2004); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

# Fiscal-related benefits ages 5 to 17

## Education

- Improved school readiness HV, ELP
- Reduced need for special education ELP
- Less grade repetition ELP
- Higher high school graduation rates ELP

## General Well-Being

- Reduced juvenile crime HV, ELP

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Muschkin, Ladd, & Dodge (2015); Olds, et al. (2004); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

# **Fiscal-related benefits ages 18+**

**Education**

**Economic Well-Being**

**General Well-Being**

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

# Fiscal-related benefits ages 18+

## Education

- Higher educational attainment **ELP**

## Economic Well-Being

- Higher earnings and tax revenue **ELP**
- Lower cash assistance **ELP**
- Higher homeownership rates **ELP**

## General Well-Being

- Improved health **ELP**
- Lower crime **ELP**

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

# Return on Investment

## Evidence from longitudinal early childhood studies

- Perry Preschool
  - Schweinhart: \$16 to \$1
  - Heckman: \$7–\$12 to \$1
- Abecedarian Educational Child Care
  - Barnett: \$4 to \$1
  - Heckman: \$7 to \$1
- Chicago Child-Parent Center
  - Reynolds: \$10 to \$1
- Elmira Prenatal/Early Infancy Project
  - Karoly: \$5 to \$1

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Karoly, et al. (1998); Masse & Barnett (2002); White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

# High return principles

- Engage parents
- Invest in quality
- Start early
- Match services to risk profile
  - Intensive and free services that start early for high-risk children
  - Less-intensive services with partial subsidy for moderate-risk children
  - No subsidy for low-risk children



# Child care market participants

Parents - primarily  
those with children  
under age 6

Private sector (except  
child care providers)

Government and  
taxpayers

Child care providers

# Child care market participants

Parents - primarily  
those with children  
under age 6  
(57% of market)

Private sector (except  
child care providers)  
(4% of market)

Government and  
taxpayers  
(39% of market)  
(mostly pre-K)

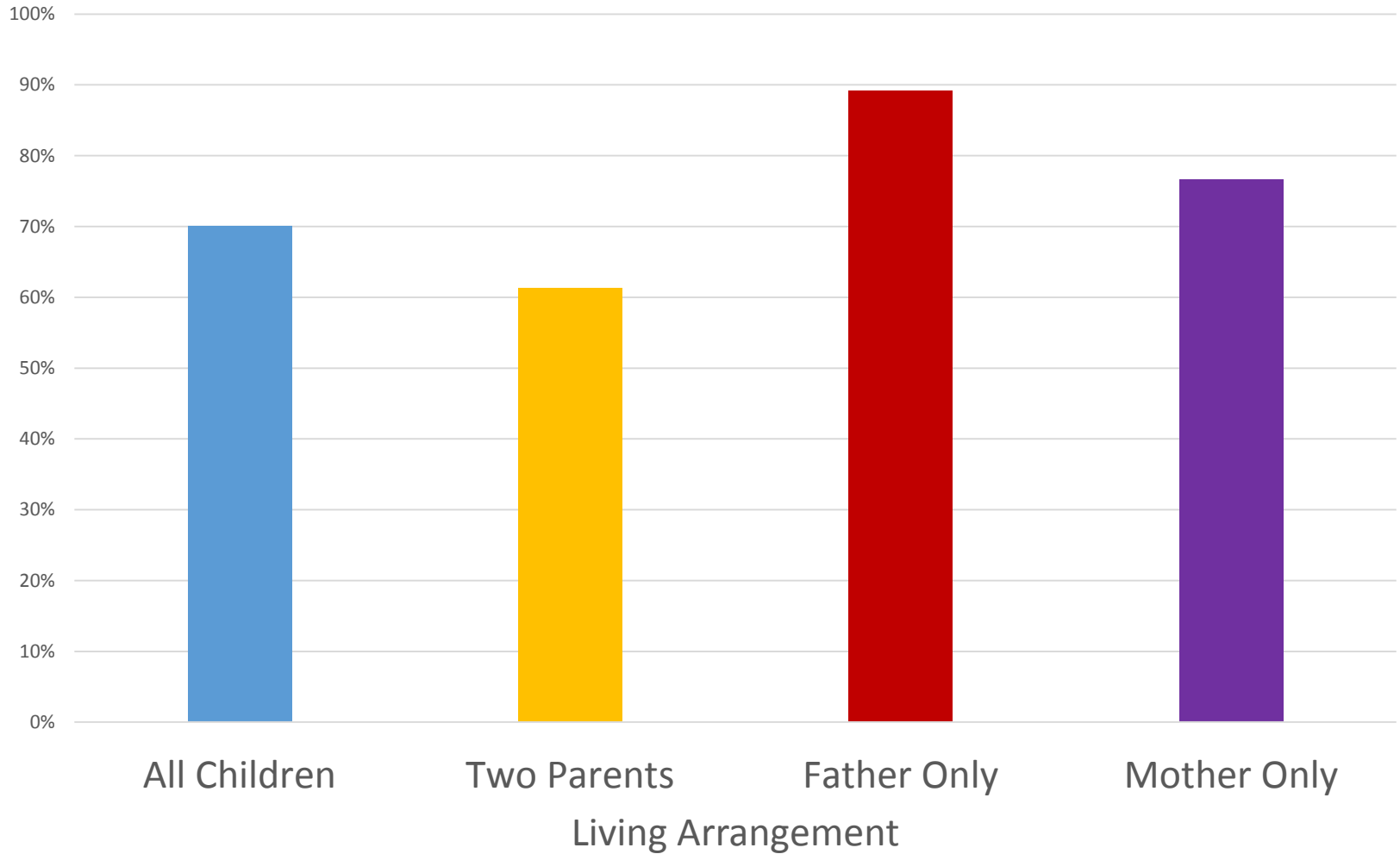
Child care providers

# Kansas Children Under Age 6 with All Parents in Labor Force

Source: American Community Survey, 2013–2017 5-Year Estimates



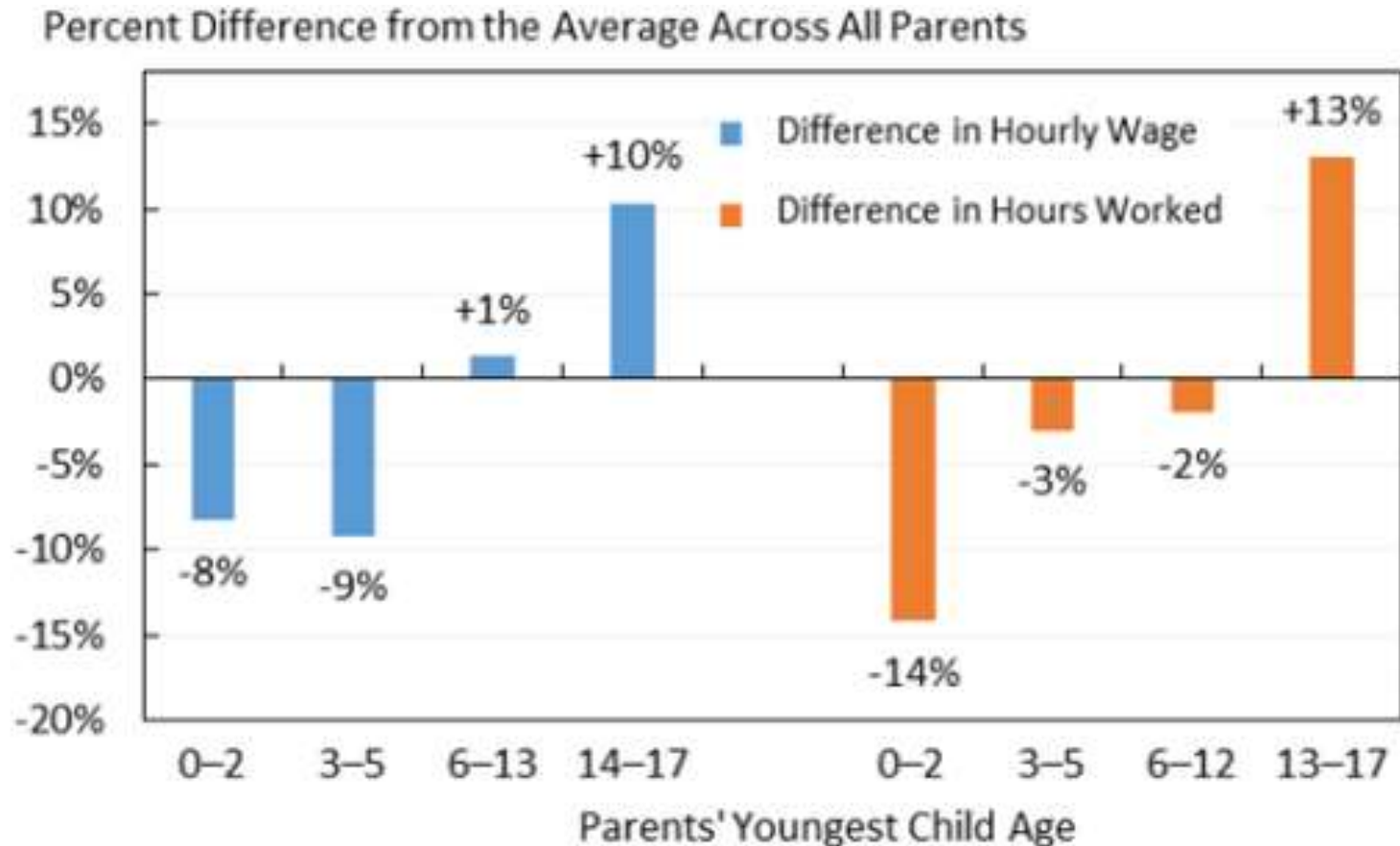
# Kansas Children Under Age 6 with All Parents in Labor Force



Source: American Community Survey, 2013–2017 5-Year Estimates



## Parents with young children earn less...



Note: Hours worked refers to average hours spent in work related activities. Hourly wage refers to the median hourly wage.

Source: CPS 2016; American Time-Use Survey 2015; CEA calculations.

Author: Aaron Sojourner, [presentation with video](#)

...but pay more

- Annual price, center-based care for an infant in Kansas: \$11,000
- Annual price, center-based care for a preschooler in Kansas: \$8,500

Source: Child Care Aware of America

...but pay more (and cost even more)

- Annual price, center-based care for an infant in Kansas: \$11,000
- Annual **cost**, center-based care for an infant in Kansas: \$17,000
- Annual price, center-based care for a preschooler in Kansas: \$8,600
- Annual **cost**, center-based care for a preschooler in Kansas: \$7,700

# **Businesses: Decision to provide support for employees to access child care**



# Businesses: Decision to provide support for employees to access child care

## Time and Effort At Work

As a result of child care (age 0-2) problems have you ever:

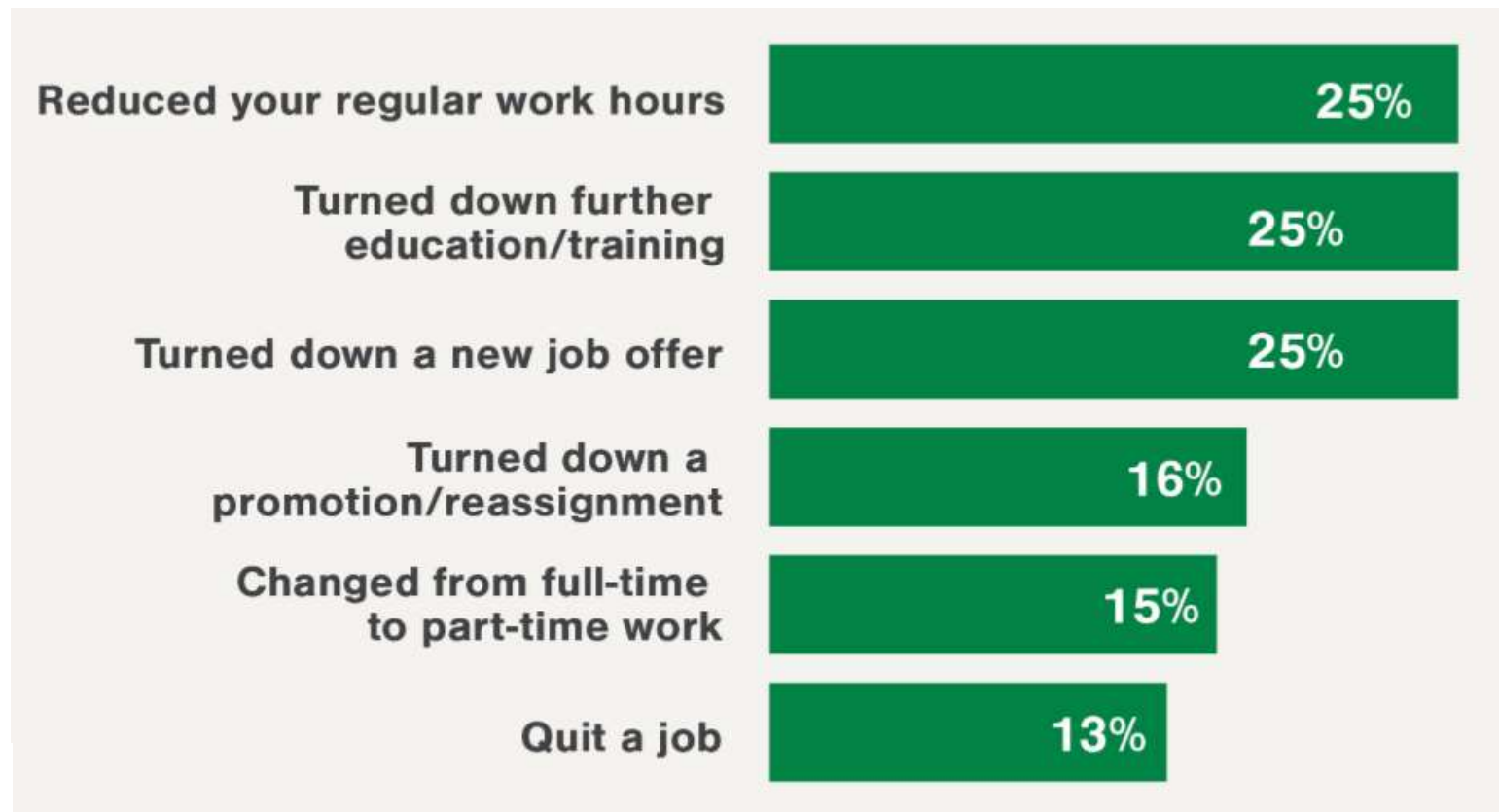


Belfield, C.R. (2018). The Economic Impacts of Insufficient Child Care on Working Families. ReadyNation, Council for a Strong America.

# Businesses: Decision to provide support for employees to access child care

## Time and Effort At Work

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Belfield, C.R. (2018). The Economic Impacts of Insufficient Child Care on Working Families. ReadyNation, Council for a Strong America.

## **Based on the parent survey results, a model generates the following annual average cost estimates:**

- Working parents lose \$37 billion (lost earnings and extra costs of job search)
- Businesses lose \$13 billion (lost revenues and extra costs to rehire)
- Taxpayers lose \$7 billion (lower income tax and sales tax)

# Child care providers

- Licensed
  - Child Care Centers (54% of Kansas slots)
  - “Family/In-Home” Child Care Providers (24%)
  - School-age care programs (22%)
- Family, Friend, and Neighbor (grandma, nanny, etc.)
  - Nationally: most common care environment
  - Data limited, but indicate much bigger role for infants

Source: Child Care Aware state fact sheets, Office of Child Care (U.S. Dept of HHS)

# Government and taxpayers: Decision to subsidize access to and supply of high-quality child care

- Current subsidies fall short of covering demand...
  - CCDF: 15/25 percent of eligible children
  - Early Head Start: 7 percent of eligible children had access
    - 10 percent in Kansas
  - Head Start: 31 percent of eligible children had access
    - 47 percent in Kansas
- ...and often fail to reflect the market in other ways, including low provider reimbursement rates or high family copayments.

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