



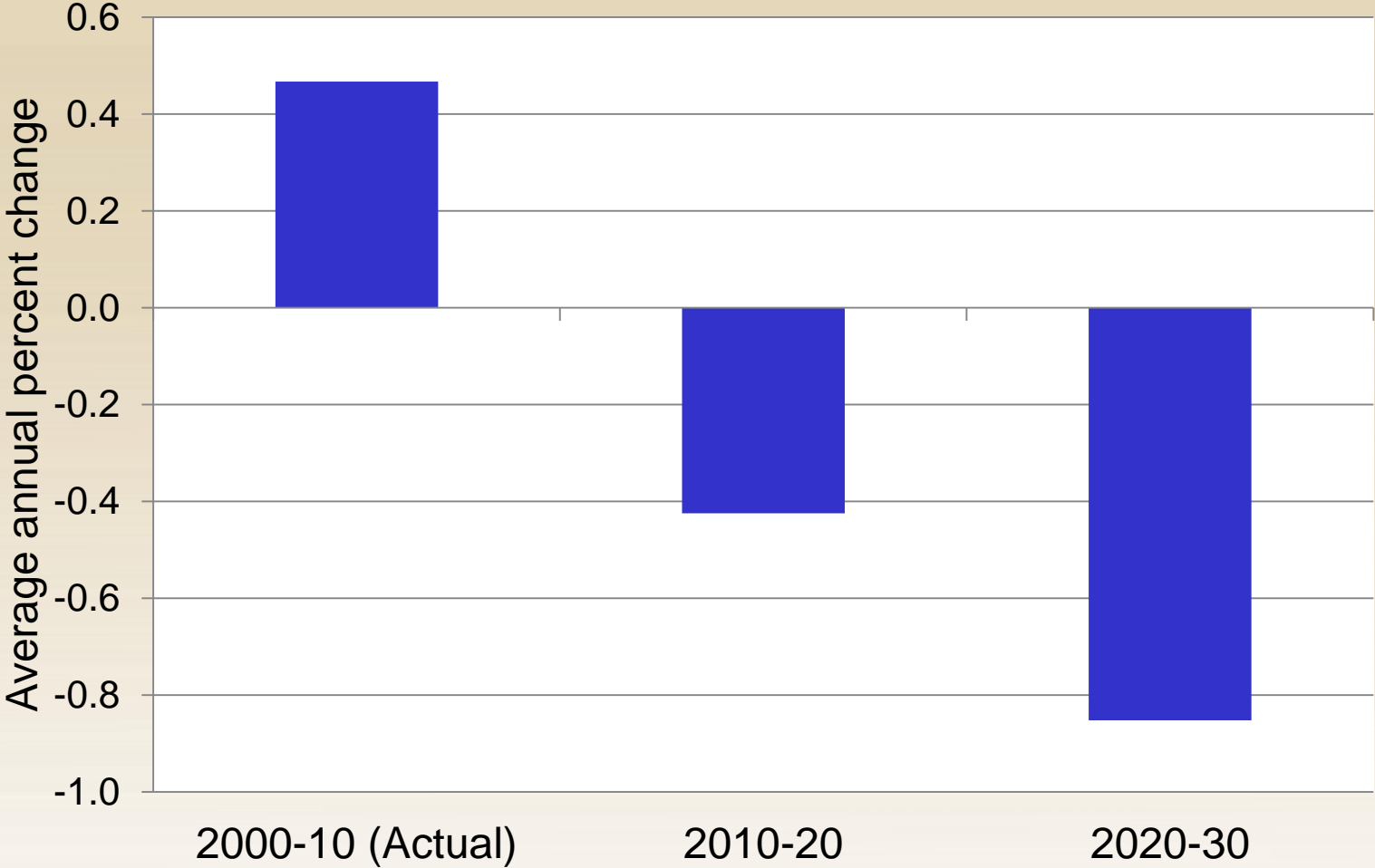
Investments in Early Childhood Development Yield High Public Returns



February 5, 2015

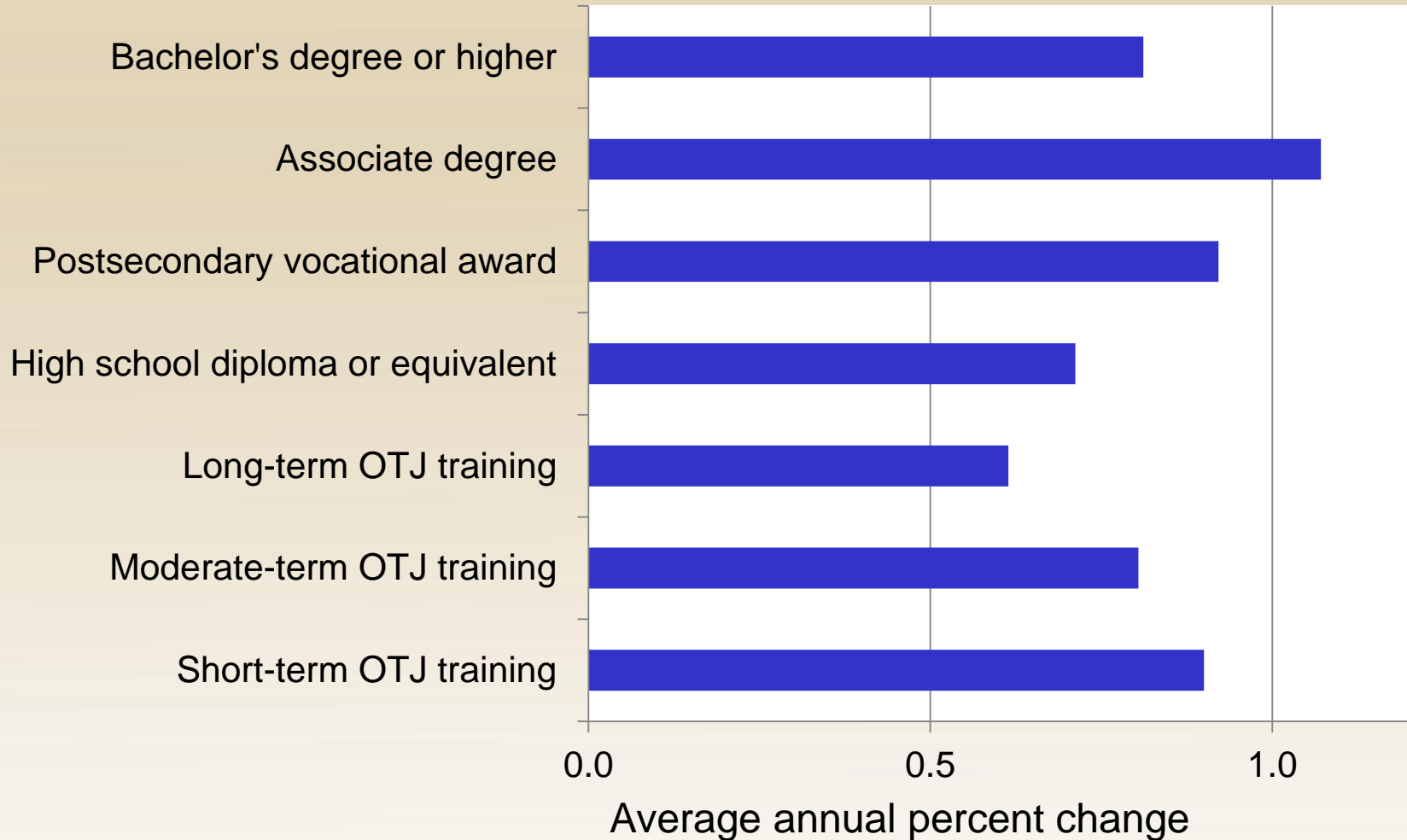
**Rob Grunewald
Federal Reserve Bank of Minneapolis**

Vermont Population Projections, Ages 15 to 64



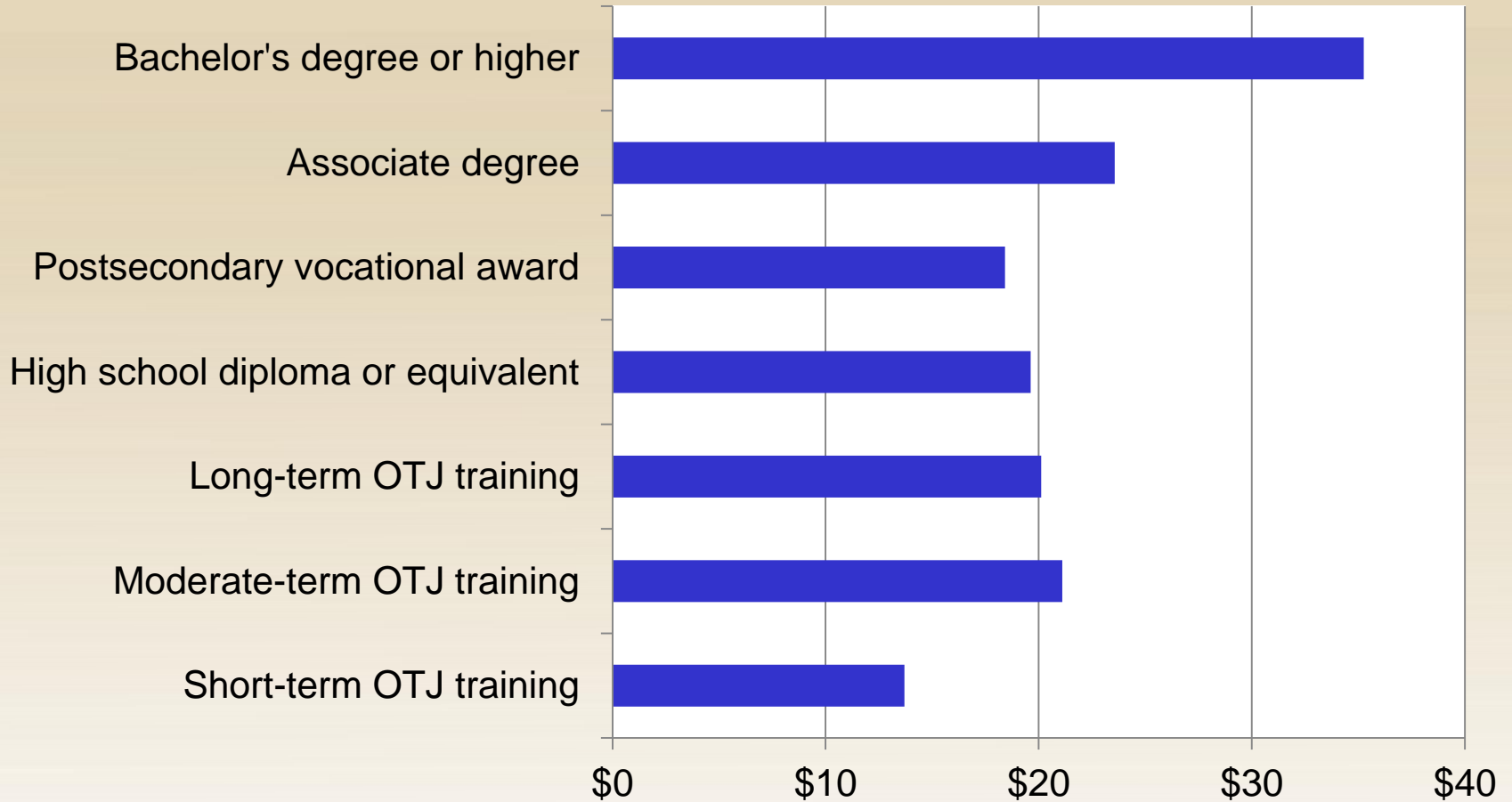
Source: U.S. Census Bureau and Vermont Agency of Commerce and Community Development

Vermont Job Growth by Primary Source of Education or Training, 2012 to 2022



Source: Vermont Department of Labor, Occupational Projections

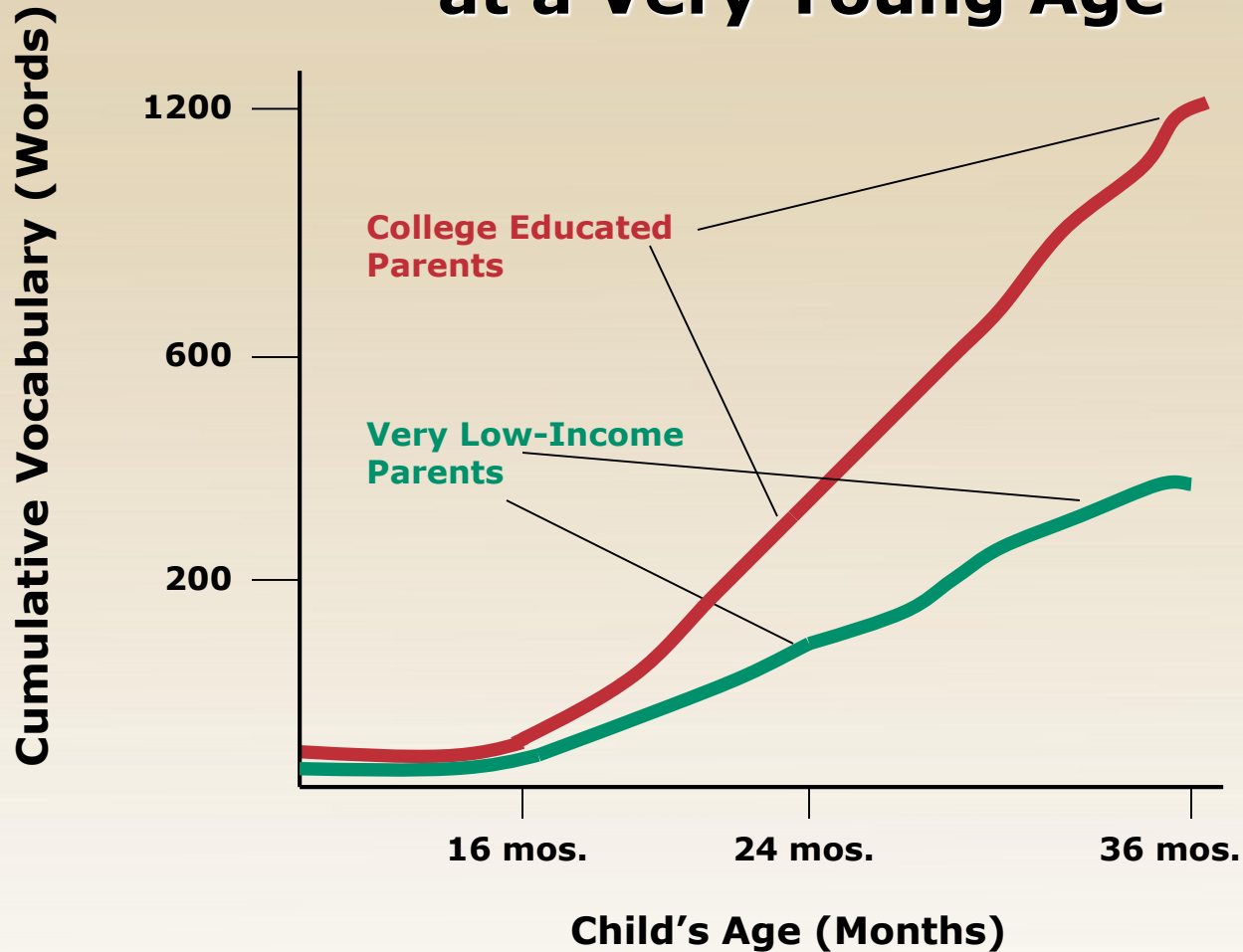
Vermont Average Hourly Wage by Source of Education or Training, 2012



Source: Vermont Department of Labor, Occupational Projections



Barriers to Social Mobility Emerge at a Very Young Age



Source: Hart & Risley (1995)

Nurse-Family Partnership



Home visiting program by registered nurses for at-risk mothers, prenatal through first two years of child's life.

- Elmira, NY (1977), low-income whites, semi-rural
- Memphis, TN (1987), low-income blacks, urban
- Denver, CO (1994), low-income mixed population, largely Hispanic

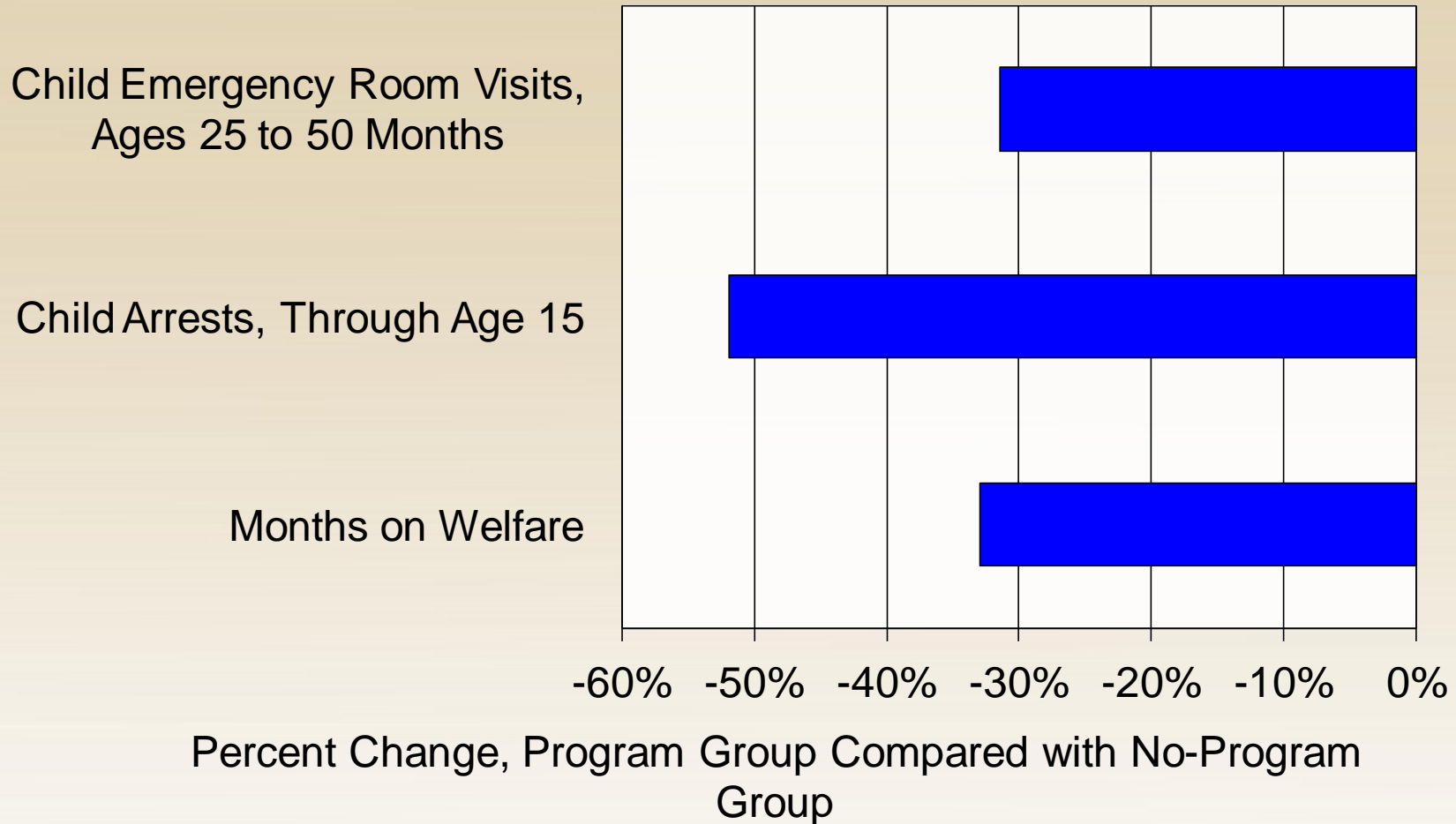


Effects Found in Two or More Trials

- Improved prenatal health
- Fewer subsequent pregnancies
- Increased intervals between births
- Fewer childhood injuries
- Improved school readiness
- Increased maternal employment

Elmira Prenatal/Early Infancy Project

High-Risk Families



Source: David Olds, et al.

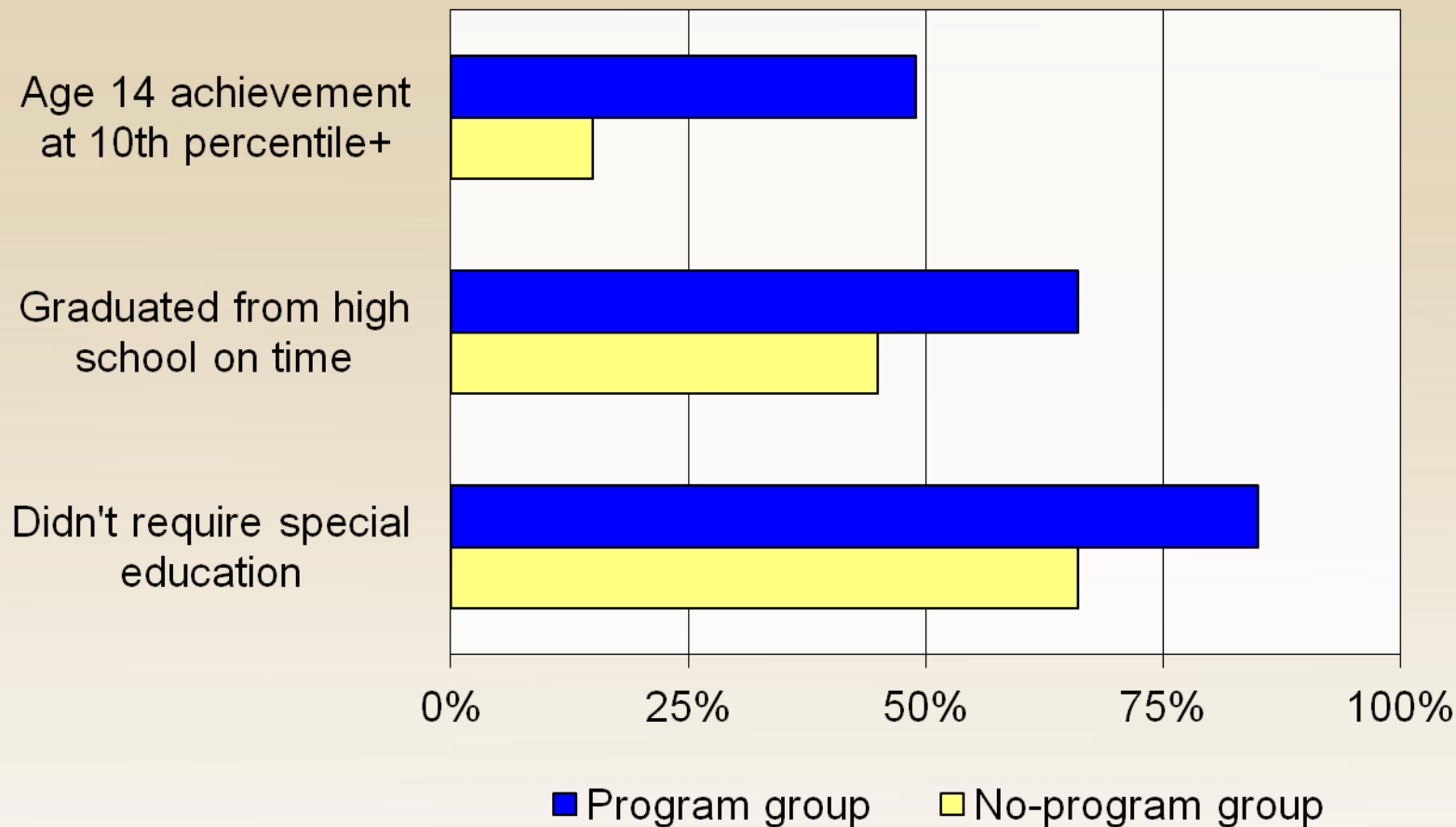


High/Scope Study of Perry Preschool

- In early 1960s, 123 children from low-income families in Ypsilanti, Mich.
- Children randomly selected to attend Perry or control group.
- High-quality program with well-trained teachers, daily classroom sessions and weekly home visits.
- Tracked participants and control group through age 40.



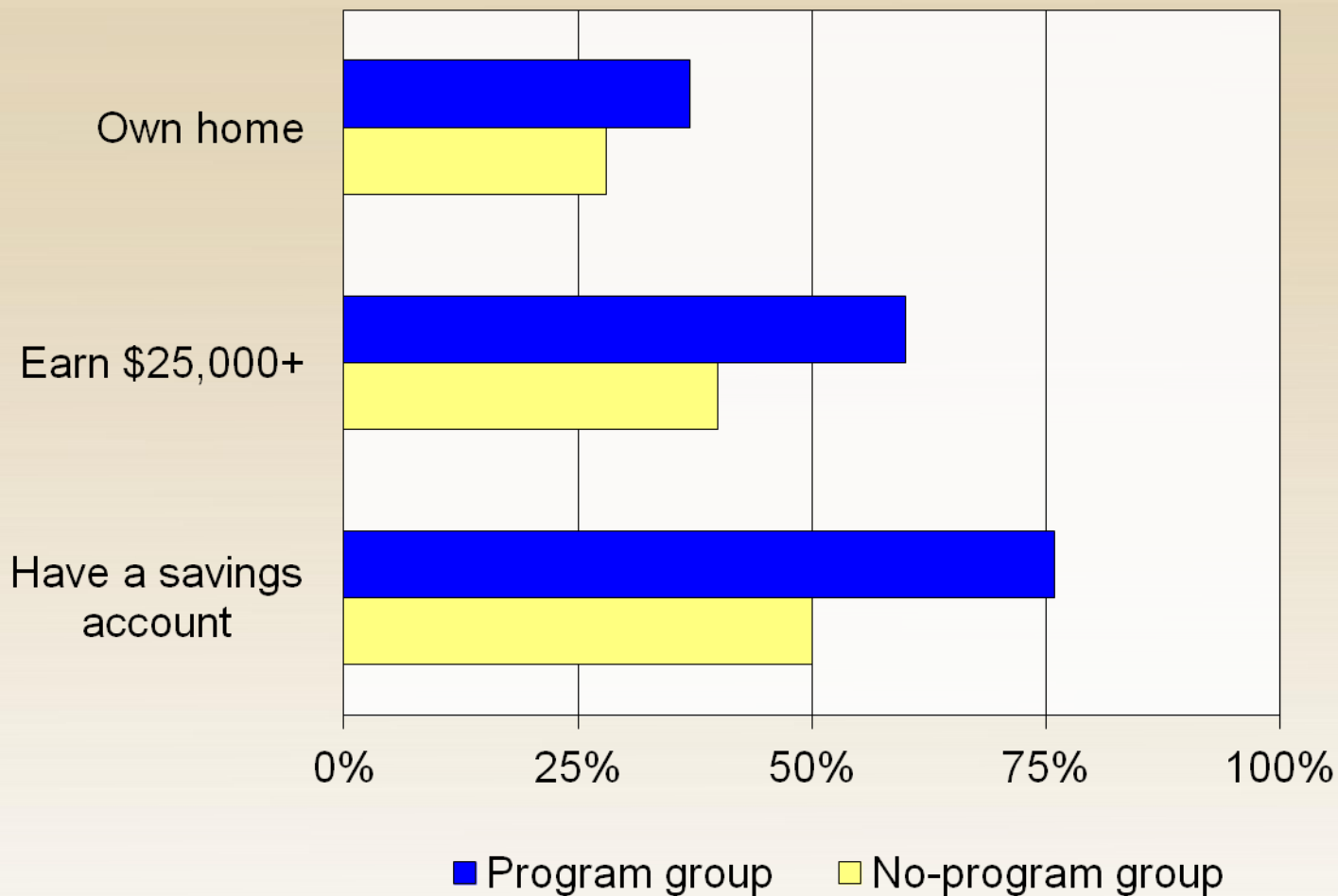
Perry: Educational Effects



Source: Schweinhart, et al. (2005)



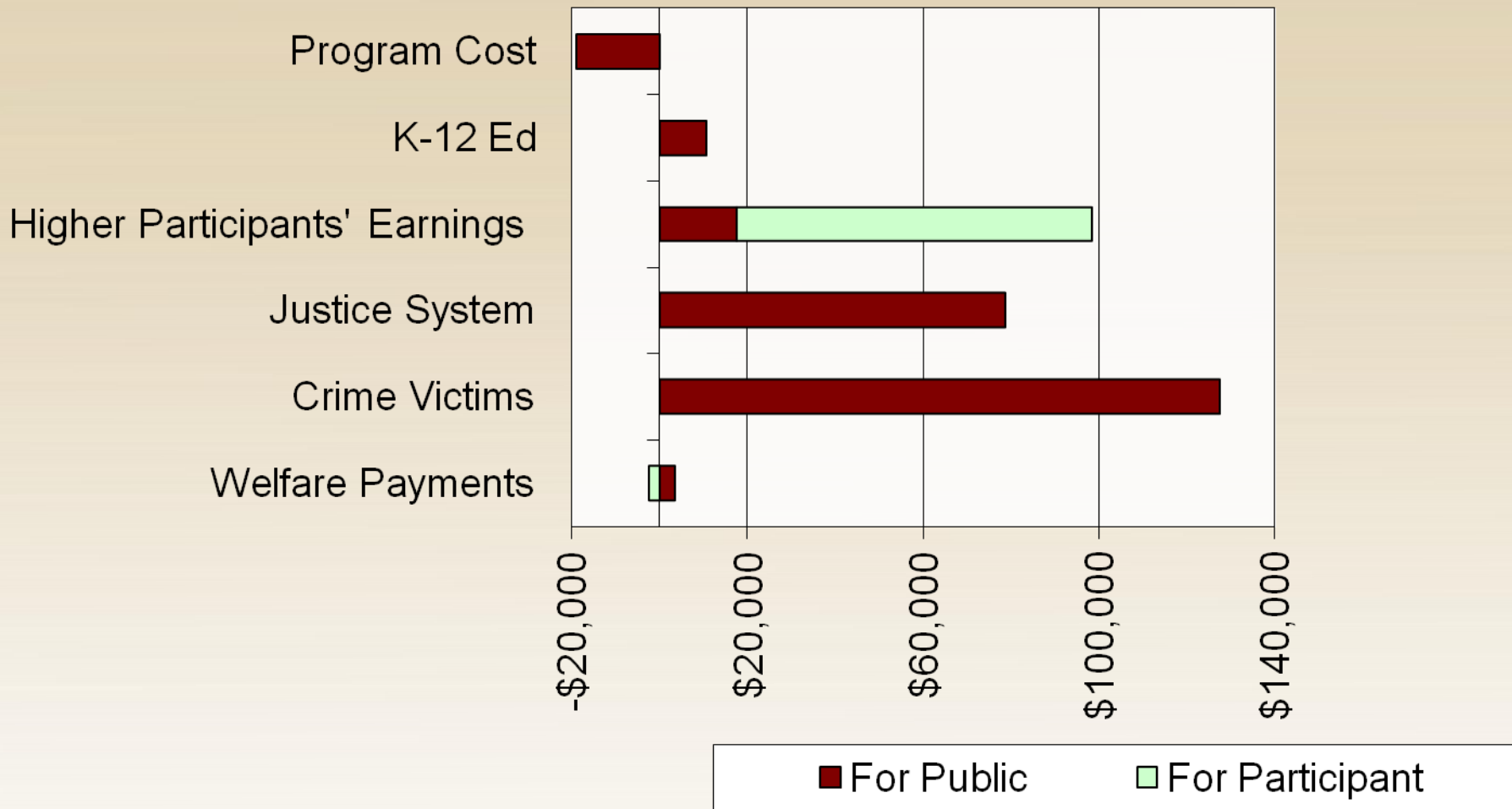
Perry: Economic Effects at Age 40



Source: Schweinhart, et al. (2005)



Perry Preschool Costs and Benefits Over 62 Years



Source: Schweinhart, et al. (2005)



Benefit-Cost Ratios for Longitudinal Studies

- Elmira Prenatal/Early Infancy Project
 - \$5 to \$1
- Perry Preschool
 - \$16 to \$1
- Abecedarian Educational Child Care
 - \$4 to \$1
- Chicago-Child Parent
 - \$10 to \$1

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



Recent research findings

- State preschool program studies show positive gains in vocabulary and emerging math and literacy skills
- Evaluations of Head Start and Early Head Start show positive impact on development with mixed findings regarding persistence
- Analysis of program similar to Abecedarian for children ages 1 to 3 shows reduction in achievement gap
- Michigan's state preschool program associated with stronger graduation rates

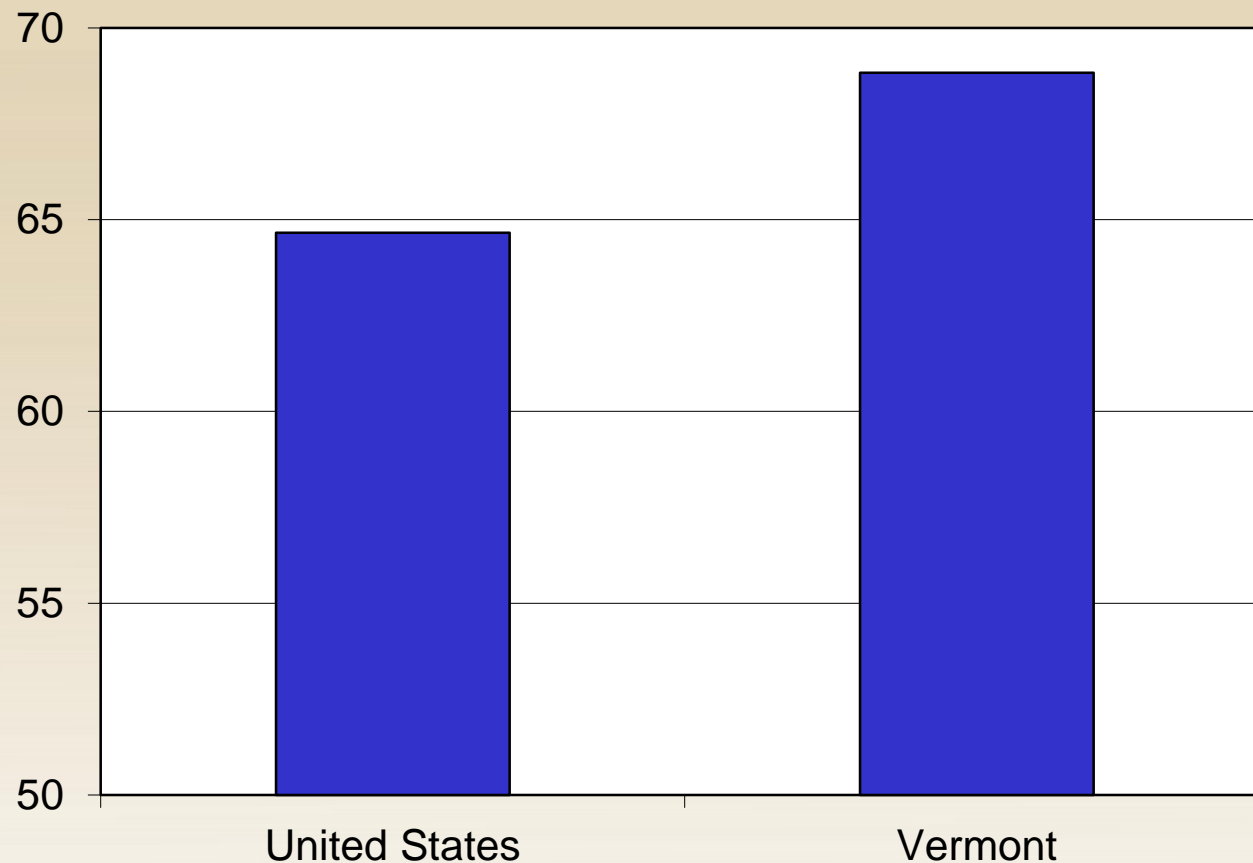


Short-Run Benefits

- Fewer low-weight and pre-term births
- Fewer emergency room visits
- Reduced child abuse and neglect
- Reduced grade retention and special education
- Reduced employee absenteeism and turnover



Percent of children under 6 years old with all parents in the labor force, 2013



Source: American Community Survey



Lessons Learned from Research

- Invest in quality
- Involve parents
- Start early
- Reach at-risk population
- Bring to scale



Key Investments

- Home visiting
- Preschool
- Quality child care
- Parent education
- Health care



Sources



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Vermont Agency of Commerce and Community Development

Vermont Department of Labor, Occupational Projections



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