



# **Investing in America's Youngest Citizens When it Matters Most—Prenatal to Age 3 *Key Findings***

**Report to the Rauch Foundation  
September 2016**

# Prepared By:

- Abe Lackman: Principal Investigator
- Martha Olson: Co-Investigator
- Susan Knapp: Co-Investigator
- Research Assistants: Tara Gore (Fordham University)

Michael Stoyer (Fordham University)

See [Bibliography and Sources](#) document for all reference materials.

This research was funded by a two-year grant from the Rauch Foundation to the Fordham University Graduate School of Education, which provided technical support and research assistance to the project.



# Executive Summary

- Current scientific research demonstrates that the first three years of a child's life are the most important in terms of brain development—when children learn language, emotional controls and establish the basis for healthy growth throughout their lifetime.
- If we want children to start school prepared to learn, and to succeed, then we must support young children and their parents from the mother's pregnancy on, especially those children and families living in poverty, whose life chances are threatened by deprivation. ***Waiting until the child is ready for school is too late to close achievement gaps and prevents too many children from even beginning to meet their full potential.***
- Perversely, public spending has not caught up with what we know about child development and the explosive brain growth that takes place in the earliest years of a child's life. ***Governments at all levels in the U.S. spend more than twice as much on a per child basis for children ages 5–17 as on children 0–5, which is almost the opposite of the support given children and families in every other wealthy nation in the world.*** The lack of investment in our youngest citizens profoundly impacts children born into families with low incomes and severely limits their life choices.





# **The Importance of Early Childhood to Life Long Achievement and Health**

# Identifying the Need: The Importance of Early Childhood in Developing Healthy, Smart Citizens

- The early years of a child's life are the most important in her development and significantly impact her future life chances and well being.
- The brain develops more rapidly between birth and age five than at any other subsequent period of life. Between birth and age three, children develop more than 1,000 trillion synaptic connections, which the brain trims on a 'use it or lose it' basis—meaning that the brain is most plastic, and most able to make new connections, in these first three years of life.

Noble, Kimberly. "Rich Man, Poor Man: Socioeconomic Diversity and Brain Development," *Cerebrum*, May 2014;  
Field, Frank. "The Foundation Years: Preventing Poor Children Becoming Poor Adults." The report of the Independent Review on Poverty and Life Chances for Her Majesty's Government, December 2014. <http://webarchive.nationalarchives.gov.uk/20110120090128/http://povertyreview.independent.gov.uk/media/20254/poverty-report.pdf>



# The Critical Importance of the First 3 Years

- The quality of relationship between parents and their young children is key to a child's social, emotional, physical and intellectual development. The home environment is the most significant aspect of a child's early life in shaping future outcomes.
- Chronic exposure to stress—whether hunger or homelessness or abusive or neglectful parenting—directly impacts the development of language, memory and self-regulatory functions in a child's brain.
- 60–70% of the achievement gap between rich and poor children is already evident by kindergarten.
  - For example, children growing up in professional families hear an average of 2,153 words per hour; children in working class families hear 1,251 words per hour; children in welfare-recipient families hear an average of 616 per hour. This vastly divergent experience translates into huge differences in school readiness by the age of 4.
- “[T]he first 1,000 days of life ... set [the stage] for fulfilling individual potential. If we really want to shape the future, to truly improve the world, we have 1,000 days to do it, mother by mother, child by child.”

*Ibid*; Heckman, James. *Giving Kids a Fair Chance*. Chpt.1. Cambridge: MIT Press, 2013; Noble, Kimberly. “Rich Man, Poor Man: Socioeconomic Diversity and Brain Development,” *Cerebrum*, May 2014; Bradbury, Bruce, et al. *Too Many Children Left Behind: The U.S. Achievement gap in Comparative Perspective*. New York: Russell Sage Foundation, 2015; Thurow, Roger. *The First 1,000 Days*. New York: PublicAffairs, 2016.



## THE GOOD NEWS

**EARLY INTERVENTION CAN MAKE A DIFFERENCE.  
SMART PUBLIC POLICY MATTERS.**

But in the U.S., public policy and public spending have not caught up with the science or with the needs of young families in a rapidly changing economic world. Most public spending on children in the U.S. takes place once children start kindergarten.

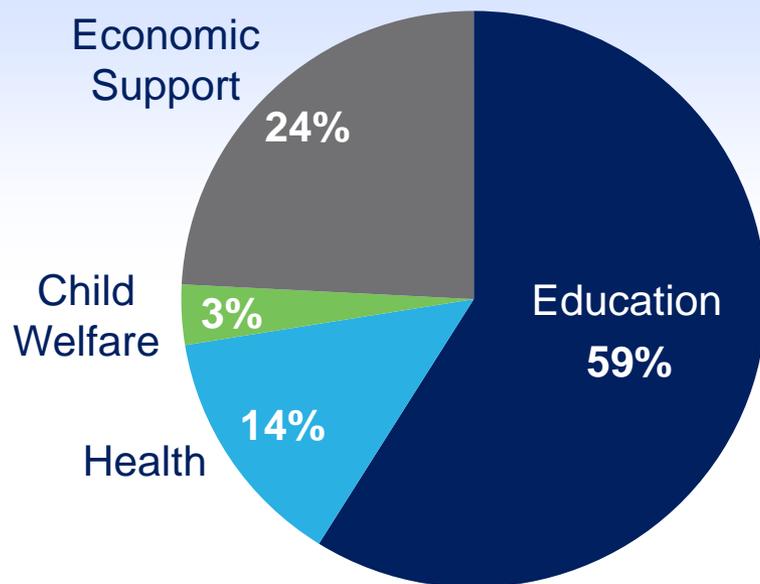




## **Current U.S. Support for Children**

# The U.S. Spends \$980 Billion Annually for Children 0–17 and Their Families

## Spending by Program Type



- Public spending on children and families totaled \$980 billion for 2012
- Elementary and secondary education and tax credits together represent 70% of overall spending on children
- The national average of public spending on children of all ages is \$20,787 per capita
- The states with the highest per capita spending tend to be those with both smaller populations and a lower portion of children in poverty, and those with a wide geographic spread



# Major Programmatic Spending on Children

Education	Health	Child Welfare	Economic Support
Elementary and Secondary Education (\$562 b)	Medicaid (\$103.8 b)	Foster Care, Adoption, Guardianship – Title IV-E (\$6.4 b)	Earned Income Tax Credit (\$67.2 b)
Preschool (\$5.3 b)	CHIP (\$11.9 b)	Child Welfare Services Promoting Safe and Stable Families – Title IV-B (\$0.6 b)	Other Tax Credits (\$59.1 b)
Head Start (\$6.8 b)	Mental Health (\$10.8 b)	Child Welfare – Title XX (\$1.7 b)	TANF (\$28.2 b)
Early Intervention (\$2.6 b)	Immunizations (\$4.0 b)	Juvenile Justice – (\$9.2 b)	Nutrition Programs – SNAP, WIC (\$64.6 b)
	Maternal and Child Health Block Grant (\$2.9 b)	State and Local Shares of Child Welfare (\$15.2 b)	Child Care and Development Fund (\$8.6 b)
			Child Support Enforcement – Title IV-D (\$9.5 b)
<b>\$577 b</b>	<b>\$133 b</b>	<b>\$33 b</b>	<b>\$237 b</b>



# We Invest Billions in Our Children—But Are We Investing in the Best Way Possible?

- According to James Heckman, Nobel prize winning economist at the University of Chicago, “the road to college attainment, higher wages and social mobility in the U.S. starts at birth. The greatest barrier to college education is not high tuitions or the risk of student debt; it’s in the skills children have when they first enter kindergarten.”

**The investments we make in all of our children will reap larger benefits if we also invested wisely in our very youngest children.**





*The real question is how to use these available funds wisely. The best evidence supports the policy prescription:*

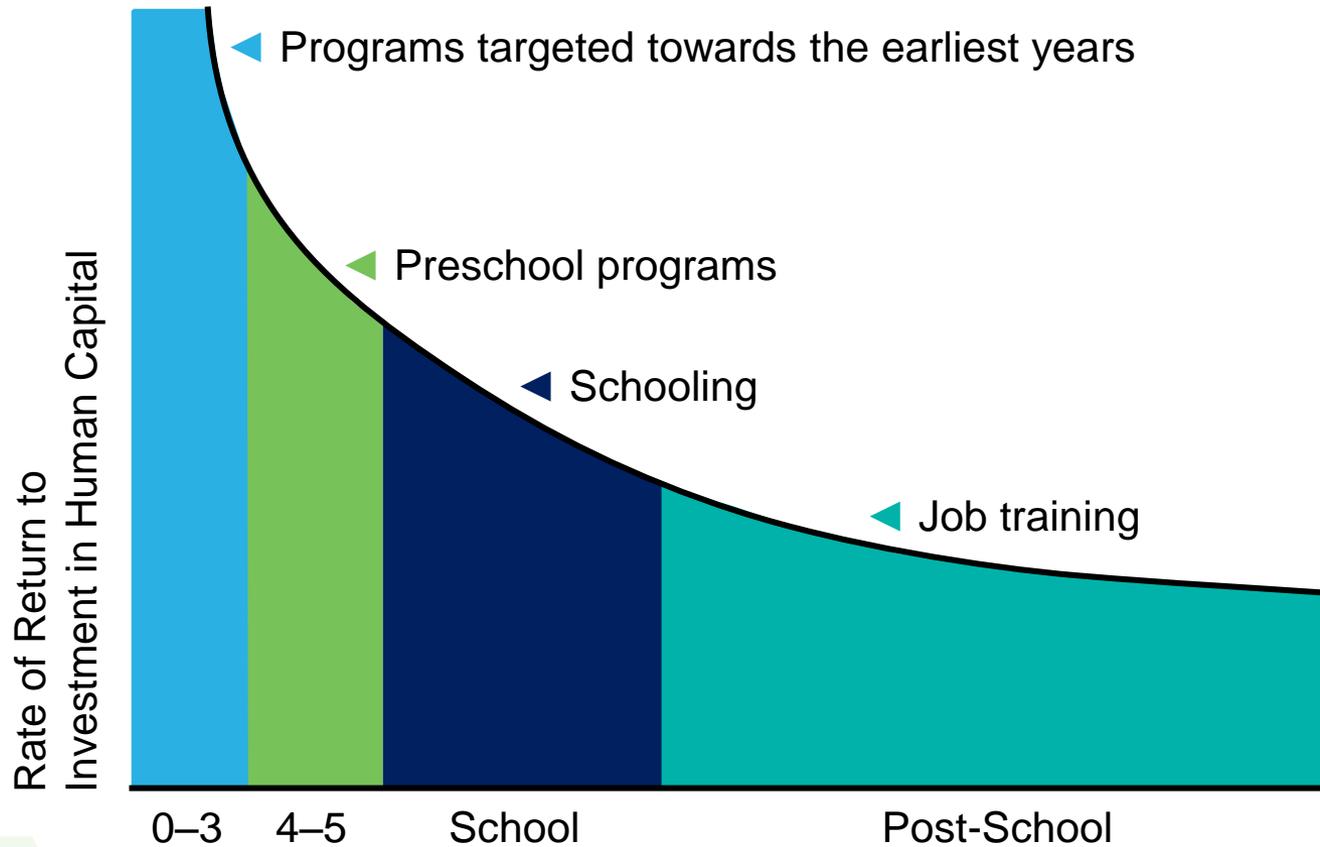
***Invest in the Very Young***



—James J. Heckman, Ph.D.  
Nobel Laureate in Economic Sciences  
2000



# The Heckman Equation

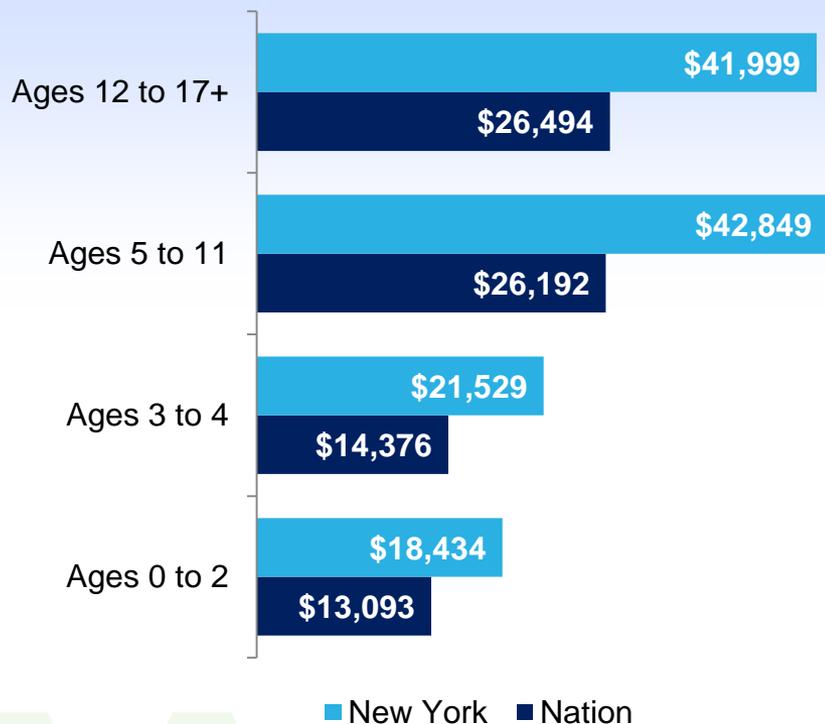


Heckman, James. "Schools, Skills, and Synapses," *Economic Inquiry*, 46(3), 289-324,



# Yet Across the U.S., Youngest Children Receive the Lowest Investment!

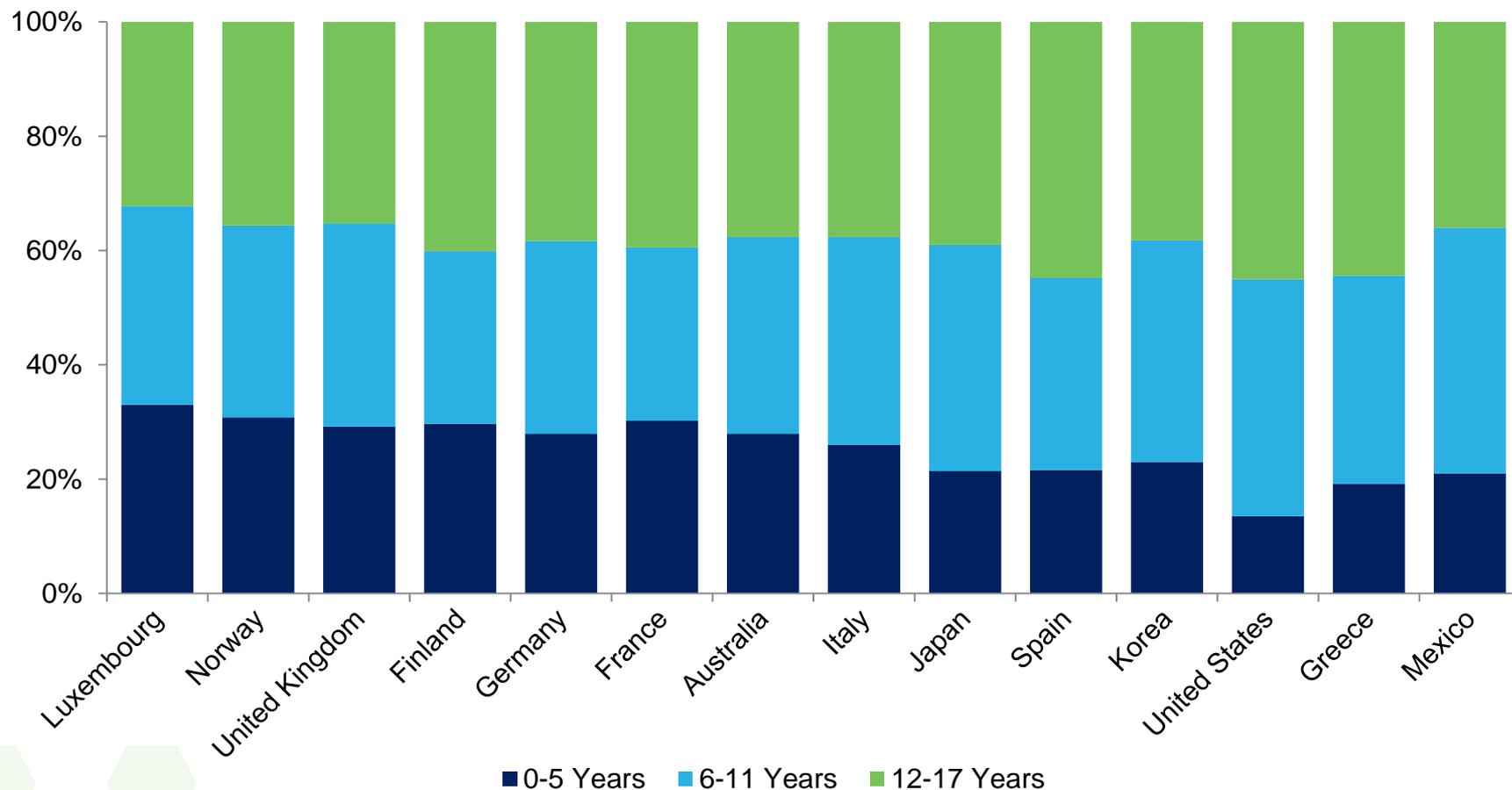
## Per Capita Spending for Children



- As a nation, governments at all levels spend more than twice as much on older children as on those under age 3
- New York follows the national trend, spending 2.3 times as much on older children
- Science says we should spend more on the very young; we do the opposite



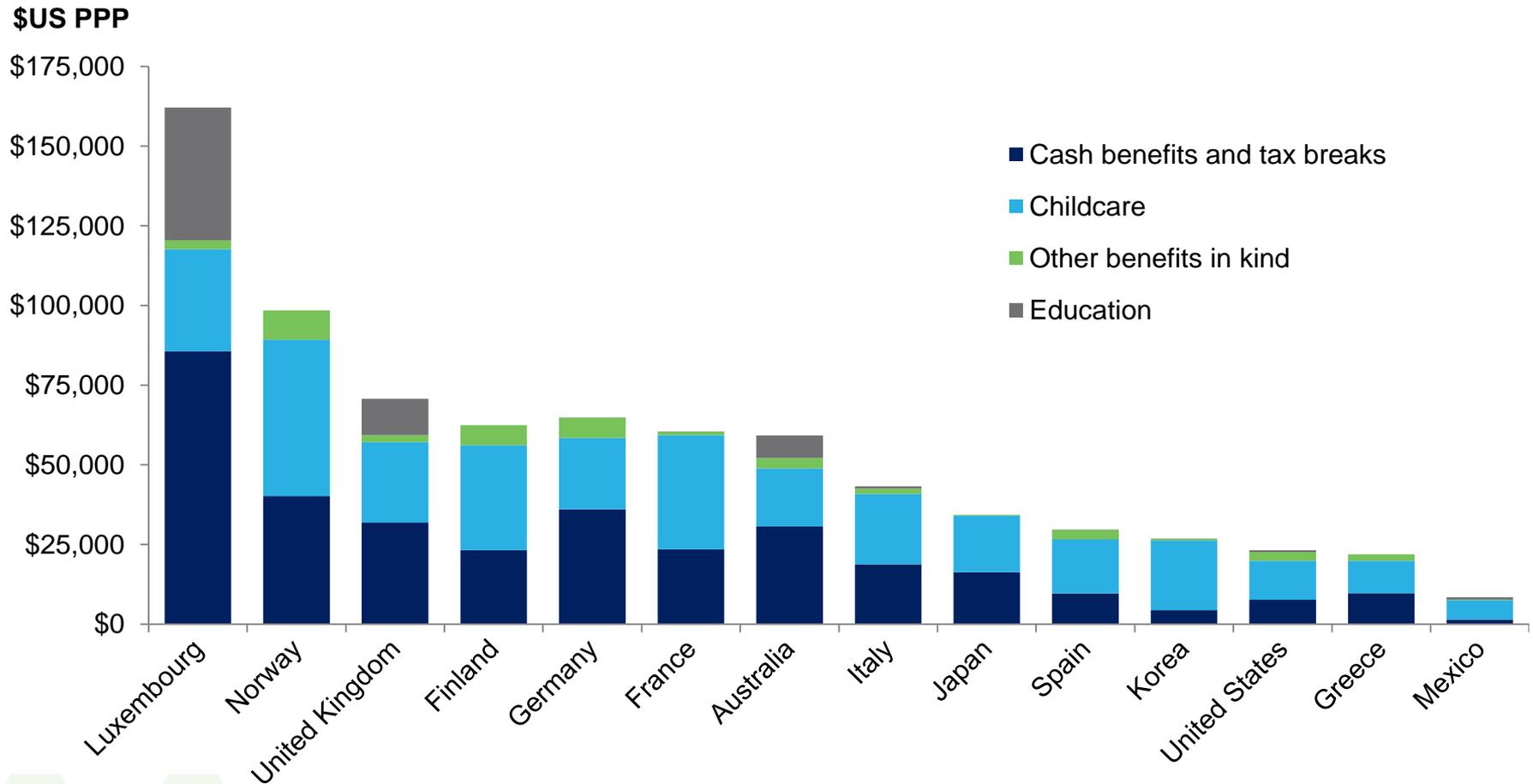
# U.S. Public Spending on Family Benefits and Education for Our Youngest Children Is Drastically Lower Than Other Wealthy Nations as a Percentage of Total Public Spending



OECD Social Expenditure Database and OECD Education Database, Chart PF1.6.B (2011 data).  
[http://www.oecd.org/els/family/PF1\\_6\\_Public\\_spending\\_by\\_age\\_of\\_children.pdf](http://www.oecd.org/els/family/PF1_6_Public_spending_by_age_of_children.pdf)



# Other Wealthy Nations Provide Many More Cash Benefits and Spend More on Child Care for Children Ages 0–5 Than the U.S.

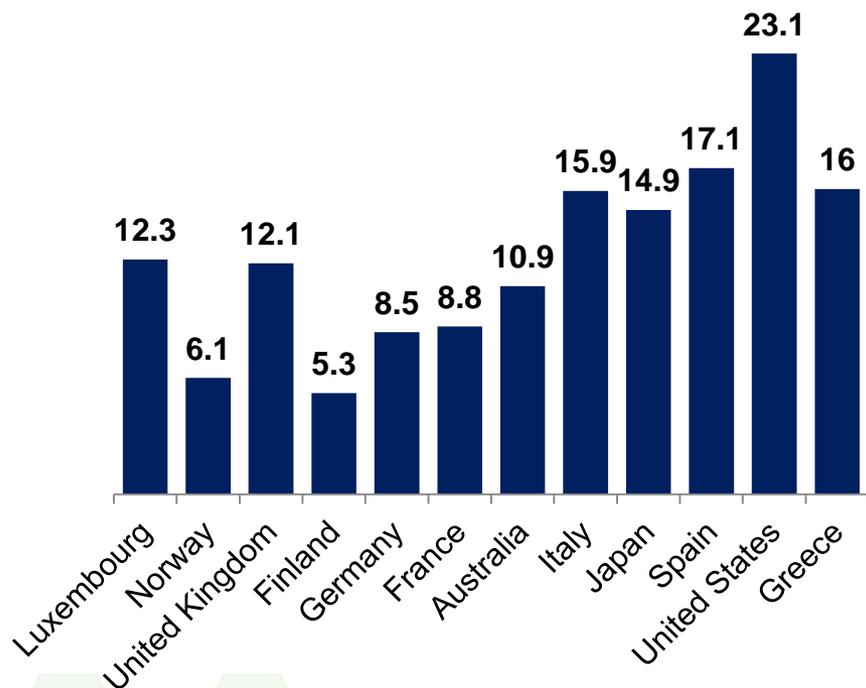


Calculated for Purchasing Power Parity in U.S. \$ for per capita social expenditures on children age 0-5 (2011), from OECD Social Expenditure Database and OECD Education Database, Chart PF1.6.C (2011 data).  
[http://www.oecd.org/els/family/PF1\\_6\\_Public\\_spending\\_by\\_age\\_of\\_children.pdf](http://www.oecd.org/els/family/PF1_6_Public_spending_by_age_of_children.pdf)

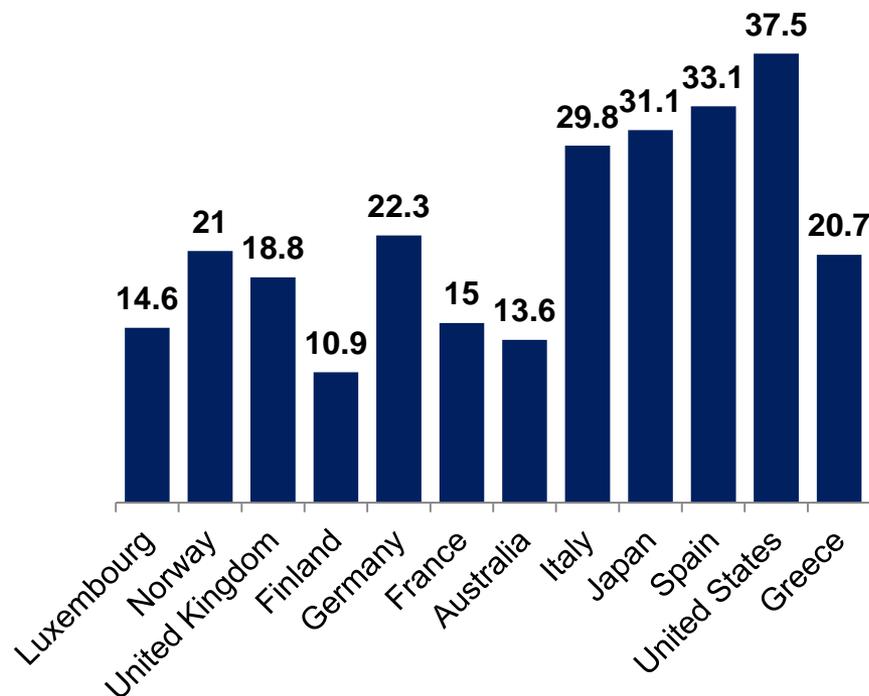


# Both the Child Poverty Rate and the Depth of Child Poverty, as Evidenced By the Child Poverty Gap, Are Significantly Greater in the U.S. Than in Other Wealthy Nations

**Child Poverty Rate** in Selected Developed Countries Based on the % of Children Living in Households With Incomes Below Half of Household Size Adjusted Median Income (2009)



**Child Poverty Gap** in Selected Developed Countries Based on the Gap Between the Poverty Line and the Median Income of Children Below the Poverty Line: In the U.S. , the Median Income for Children Living in Poverty Is 38% Below the Poverty Line (2009)



Adamson, Peter. "Measuring Child Poverty: New League Tables of Child Poverty in the World's Rich Countries," UNICEF Innocenti Research Centre Report Card 10, 2012. <http://www.unicef.org.uk/Documents/Publications/RC10-measuring-child-poverty.pdf>; Gould, Elise and Hilary Wething. "U.S. poverty rates higher, safety net weaker than in peer countries," Economic Policy Institute, July 24, 2012. <http://www.epi.org/publication/ib339-us-poverty-higher-safety-net-weaker/>



# In the U.S., Twice as Many Children Live in Poverty as Adults

**Children from poor families lag far behind their peers when they start school and never catch up. Their parents tend to be younger and they live in less stable families. Unlike their peers in other countries, poor families in the United States do not have paid parental leave, universal preschool or reliable income supports.**

- Only 1 out of 8 adults is poor, compared to one out of four children.
- In 2014, 25% of all U.S. children lived in poverty—1 out of 4 U.S. children—compared to 21% in 2008. In 2015, the poverty line was set at \$24,250 for a family of 4, or \$15,930 for a family of 2.
- Children living in the poorest families, with incomes 50% BELOW the poverty line, grew nationally from 9% to 12 % between 2008 and 2014. These families lived on less than \$9,895 a year for a family of 3.
- In 2014, 48% of all U. S. children lived in families with incomes below 200% of poverty, up from 43% in 2008.

Bradbury, Bruce, et al. *Too Many Children Left Behind: The U.S. Achievement gap in Comparative Perspective*. New York: Russell Sage Foundation, 2015; Annie E. Casey Foundation. *Kids Count 2015 Data Book*. <http://www.aecf.org/resources/the-2015-kids-count-data-book/>; Ratcliff, Caroline. "Child Poverty and Adult Success." *The Urban Institute*, 2015. <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000369-Child-Poverty-and-Adult-Success.pdf>; Ratcliff, Caroline and Signe-Mary McKernan. "Child Poverty and Its Lasting Consequences." *The Urban Institute*, 2012. <http://www.urban.org/research/publication/child-poverty-and-its-lasting-consequence>; Children's Defense Fund. *Ending Child Poverty*, 2016. <http://www.childrensdefense.org/policy/endingchildpoverty/>; US Federal Poverty Guidelines, 2015.



# Closing the Opportunity and Achievement Gaps for Our Children

- Compared to the U.S., young children in the United Kingdom, Canada and Australia born into the lowest socio-economic groups start school with **less** of an achievement gap than in the U.S., due in large part to greater availability of government supports such as:
  - Family allowances
  - Paid maternity leave of at least 6 months;
  - Subsidized, quality child care and quality universal pre-K.
- Reducing the achievement gap based on socio-economic status in the early years would make it easier to reduce inequality during the school years: the gap is large but it is not intractable—if other countries can begin to close it, the U.S. can as well.



# Without Comprehensive New Investments, the Achievement and Opportunity Gaps Our Children Face Will Continue to Grow

- Socioeconomic-status inequalities in children's cognitive skills at age 5 are **significantly larger** in the US than they are in the U.K., Canada or Australia—children of the least educated and poorest parents lag at least 1 standard deviation behind those with high status parents.
- **This gap leads to less intergenerational mobility in the U.S. than in these other countries.**
- Skills gaps parallel income gaps, which are more pronounced in the U.S. and are linked with disparities in resources for young children, like access to lessons and activities, books, healthy nutrition, and parental discipline styles.
- These gaps often continue to grow as children work their way through U.S. schools. **However, a significant portion of low test scores of low socioeconomic-status students can be explained by the large disadvantage they face when they enter school at 4 or 5.**
- The low to mediocre international PISA (Program for International Student Assessment) test scores earned by U.S. students can be attributed, in part, to the lack of resources invested in low income children from the time they are born to when they start school.

Bradbury, Bruce, et al. *Too Many Children Left Behind: The U.S. Achievement gap in Comparative Perspective*. pp 85-86, 129-134. New York: Russell Sage Foundation, 2015. The PISA tests are coordinated by the Organization for Economic Cooperation & Development and are conducted in the U.S. by the National Center for Education Statistics.



# Investing in Early Childhood Programs Will Have Enormous Benefits for Children, Families, Society and the U.S. Economy as a Whole

New evidence demonstrates that investing in early childhood programs will provide tremendous benefits to the U.S. economy across the board.

**Children with better early childhood care and educational opportunities grow up to be more likely to work and less likely to interact with the criminal justice system. They grow up in better health and earn higher wages. They pay more taxes and draw on fewer government resources.**



# Investments in Quality Early Childhood Programs Will:

- Decrease the debilitating achievement gaps between low-income children and other children. Estimated benefits from eliminating these achievement gaps range from \$10 billion to \$70 billion;
- Help to close the achievement gap between American students and those of other higher performing OECD countries, boosting US GDP by roughly \$180 billion annually; and
- Likely enable more women to participate in the workforce; if women's workforce participation rates equaled those of Canada or Germany, for example, another 5.5 million women would join the workforce, adding at least 3.5% to GDP or an annual \$600 Billion in economic activity and meaning larger incomes for more U.S. families.

