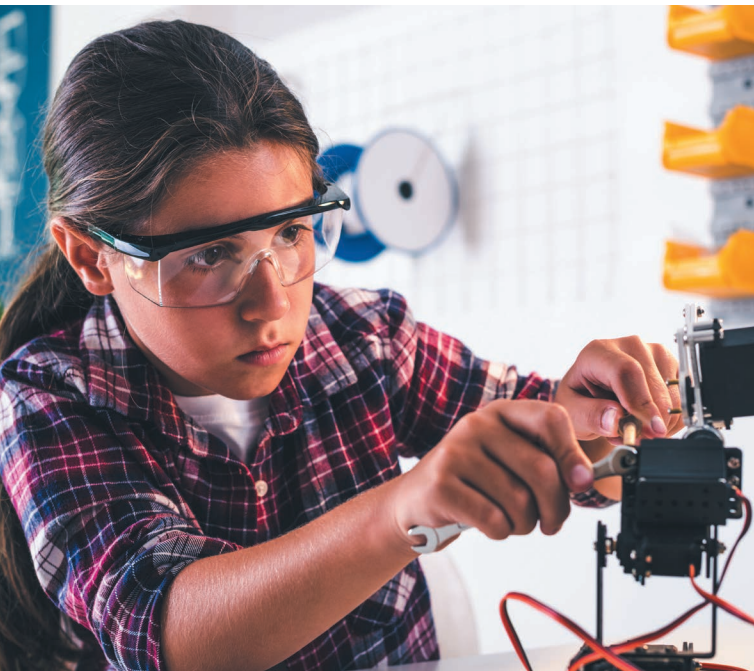


# HOW STATES CAN KNOCK DOWN BARRIERS TO INNOVATION

**H**igh-impact inventors, though rare, can generate lasting ideas that set economic or social trends. But historical racism and sexism, as well as ongoing discrimination and bias, have restricted the pool of innovators, likely limiting both the quantity and quality of innovation. Narrowing these disparities could help states build more prosperous, equitable economies by opening opportunities in innovation to a more diverse talent pool and spreading its benefits more widely.



## About us:

**The State Priorities Partnership** shapes state policies that reduce poverty, advance equity, and promote inclusive economies that pave the way for widespread prosperity. It is coordinated by the Center on Budget and Policy Priorities.

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A century ago, when legal and cultural prohibitions barred women and people of color from opportunities to innovate and bring their inventions to market, white men accounted for about 96 percent of U.S. inventors. Stark disparities by race, class, and gender persist today:

- Men still represent approximately 82 percent of inventors.
- White children are three times likelier than Black children and eight times likelier than Latinx children to grow up to be inventors.
- Children from affluent families are nine times likelier to be inventors than those from low-income backgrounds.
- States diverge sharply on how much innovation they generate, with the Northeast, Midwest, and West Coast leading the pack, and the South lagging behind.



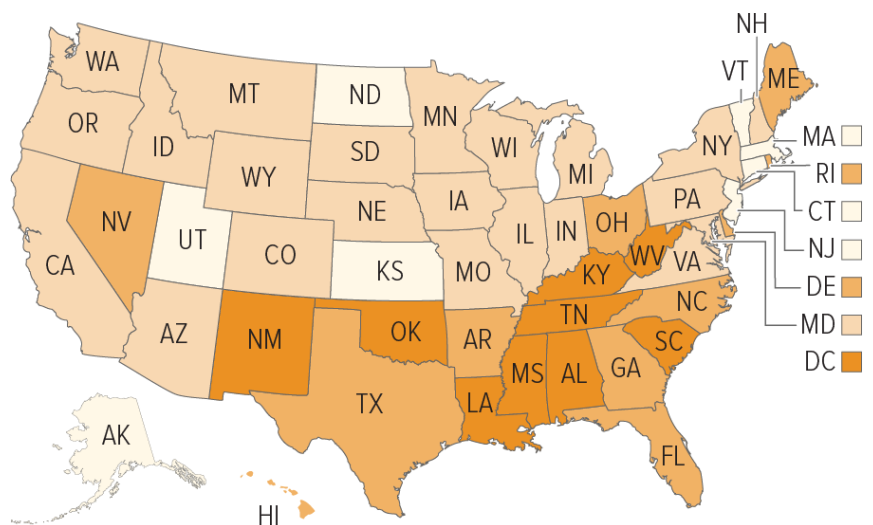
These findings come from the groundbreaking “Lost Einsteins” study from a team of experts that includes Dr. Raj Chetty. Building on this and other emerging research, we find that knocking down barriers to innovation can provide an exciting opportunity for states to become more prosperous and equitable. Giving more young people a chance to develop their creative talents and pursue careers in science, medicine, technology, or similar fields might spur a rise in breakthroughs that are essential to broadly shared prosperity. It could also enhance the quality of innovation by diversifying the range of ideas, perspectives, and experiences that go into it.

If children from non-rich families grew up to invent at the same rate as children from high-income families, the increase in states’ inventors could range from almost double in Utah to over five times more in the District of Columbia. Gains would likely be most pronounced in the South – where a legacy of harsh public policy and underinvestment has historically limited people’s innovative potential – and among people of color nationwide.

### Eliminating Income Disparities in Innovation Could More Than Triple Many States’ Inventors

If children from families in bottom 80% grew up to invent as much as those at top, states could have:

■ 3.0 -5.4 times as many inventors ■ 2.5-3.0 ■ 2.0-2.5 ■ 1.8-2.0



Note: Inventors = those who file a patent.  
Source: CBPP analysis of data from Bell et al., November 2018.



# States Can Build Stronger, More Inclusive Economies by Knocking Down Barriers to Innovation

Innovation – patenting new inventions and processes – is tightly linked to economic growth and employment



High-tech firms are a major source of U.S. job creation today, and metro areas with high patent levels tend to have **stronger productivity** and **lower unemployment**.



The average patent is worth over half a million dollars in market value, and considerably more in social value, economists estimate.

But structural barriers limit innovation's full potential

Children from historically excluded groups far less likely to become inventors:

Girls are 4 times less likely to grow up inventors than boys



Black children, 3 times less likely than white children



Latinx children, 8 times less likely than white children



Low-income children, 9 times less likely than wealthy children



If *all* children had equal access, states could unlock big gains, including higher-quality innovations.



California could more than double its inventors



Mississippi could quadruple its inventors

States can start by:

- ✓ providing quality early education and K-12 for all children
- ✓ bolstering families' economic security with workers' tax credits, expanded health services, higher minimum wage
- ✓ better leveraging colleges and universities
- ✓ fostering more diverse professional networks and communities
- ✓ dismantling barriers for women and people of color through policies like paid family leave, criminal justice reform

Note: Inventors = those who file a patent.



For states to unleash the potential of all their residents, they should prioritize policies designed to maximize their creativity and ingenuity. They can start with local pilot projects to implement targeted interventions such as STEM internships and mentor programs, as the “Lost Einsteins” researchers suggest. But states that fail to tackle the underlying structural problems that so skewed innovation in the first place will slow progress toward a more representative and vital inventor pool. To champion more wide-ranging strategies that can help unlock more people’s potential over time, states can:

- **PRIORITIZE HIGH-QUALITY LEARNING FOR ALL CHILDREN FROM BIRTH THROUGH ADOLESCENCE**

Children are likeliest to realize their full creative and economic potential in a supportive environment with rich, sustained learning opportunities from birth until adulthood. By boosting early education funding and quality, and maintaining that commitment through K-12, states can get more young people from diverse backgrounds into innovative pursuits.

- **BOLSTER FAMILIES’ ECONOMIC SECURITY SO THAT MORE PEOPLE CAN PURSUE INNOVATION**

Children from low- or middle-income families are far less likely to become inventors as adults, and adults who feel economically insecure appear less inclined to pursue creative ventures. Strengthening families’ economic condition by raising incomes and ensuring access to public support programs could foster more innovation both today and down the road.

- **LEVERAGE COLLEGES AND UNIVERSITIES TO STRENGTHEN AND DIVERSIFY LOCAL NETWORKS OF INNOVATION**

Higher learning institutions are hubs for fostering innovation, and expanding their footprint could heighten that effect, especially if lawmakers target new investments to institutions that serve large cohorts of people from low-income backgrounds, women, and communities of color. Increasing the number of college graduates from historically excluded communities could also bolster innovation long-term, as the benefits of higher education are passed on from parents to children and from local mentors to young people.

- **FOSTER MORE DIVERSE PROFESSIONAL NETWORKS, COMMUNITIES, AND SCHOOLS**

States could enact policies that get more people with different perspectives and experiences together to share ideas, learn from one another, and maximize creative talents. Various research lifts up the value of diversity, integration, and collaboration in decision-making and creative thinking, suggesting that policies to promote them could stimulate innovation.

- **PURSUE OTHER POLICIES THAT BREAK DOWN BARRIERS FOR WOMEN, PEOPLE OF COLOR, AND OTHERS TOO OFTEN OVERLOOKED**

States can buttress their more direct strategies to increase innovation with efforts to dismantle structural racism and sexism. Examples include reversing unwise criminal justice policies that disrupt families and community networks and helping families better balance work and caregiving through policies like paid leave.