



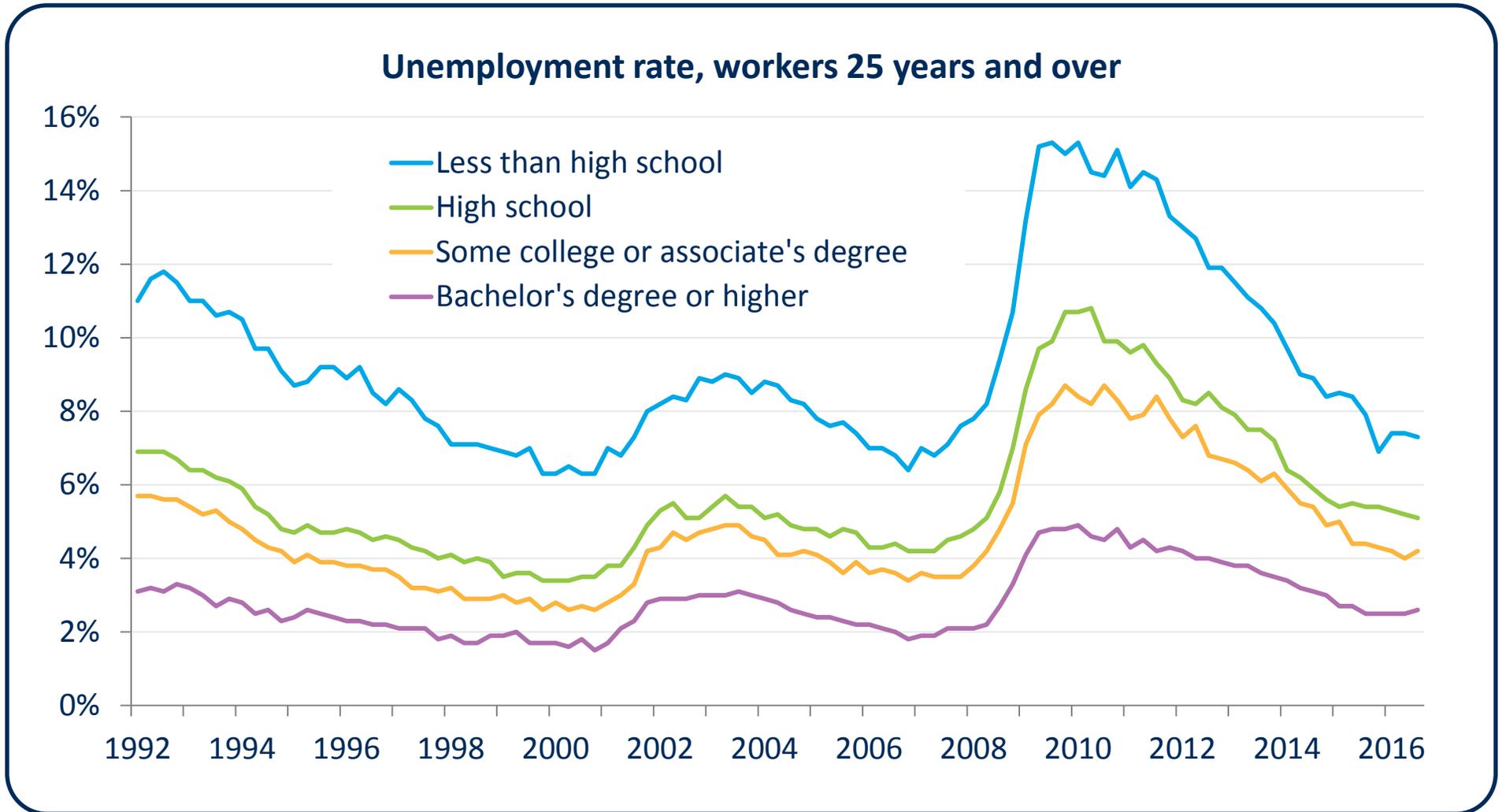
The Value of Early Childhood Education: Some Perspective from Higher Education

Kartik Athreya
February 7, 2017

The views and opinions expressed are those of the presenter. They do not represent an official position of the Federal Reserve Bank of Richmond or the Federal Reserve System.

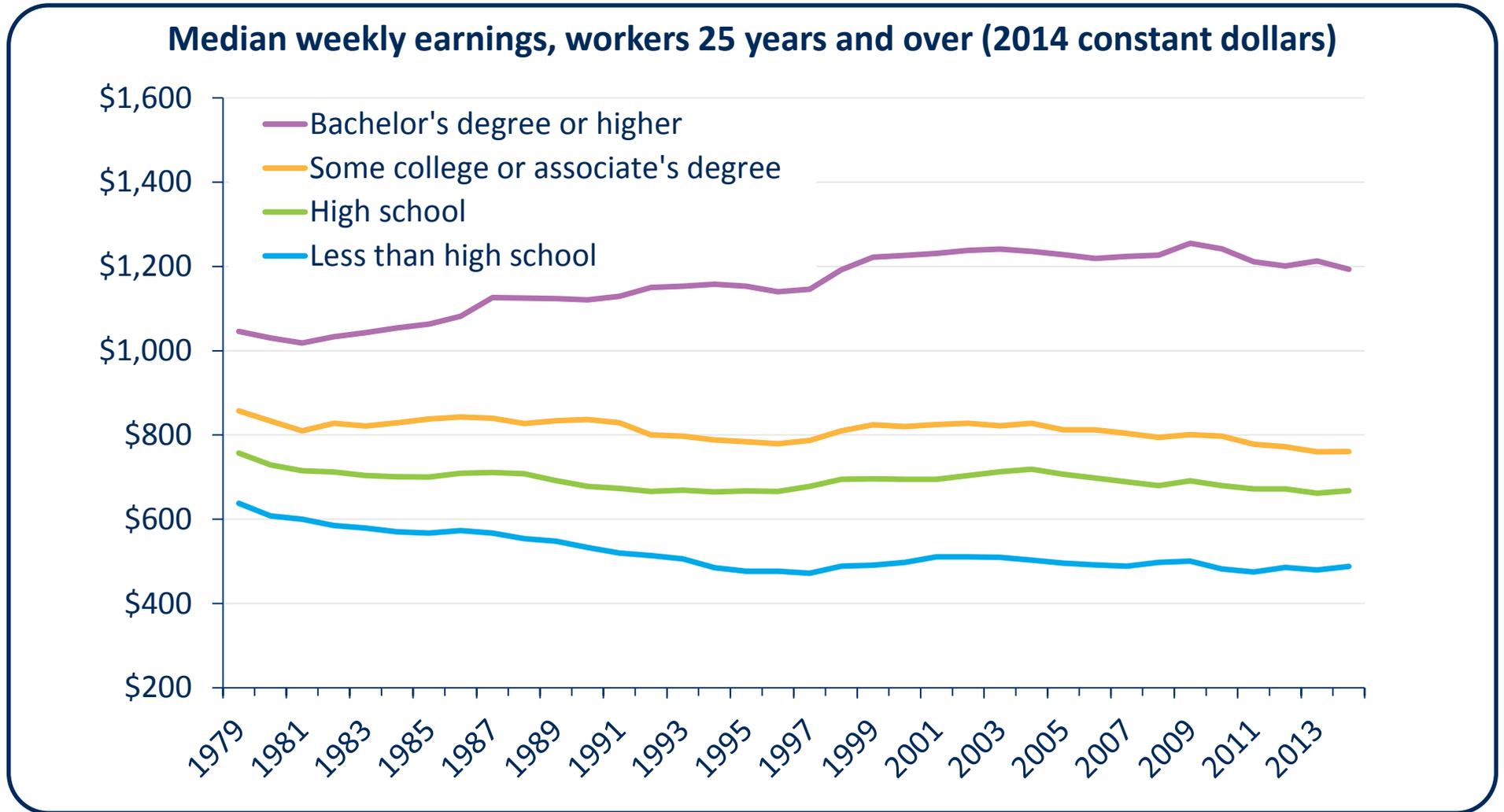
Skills: The Payoff

Skills have long inoculated against unemployment...



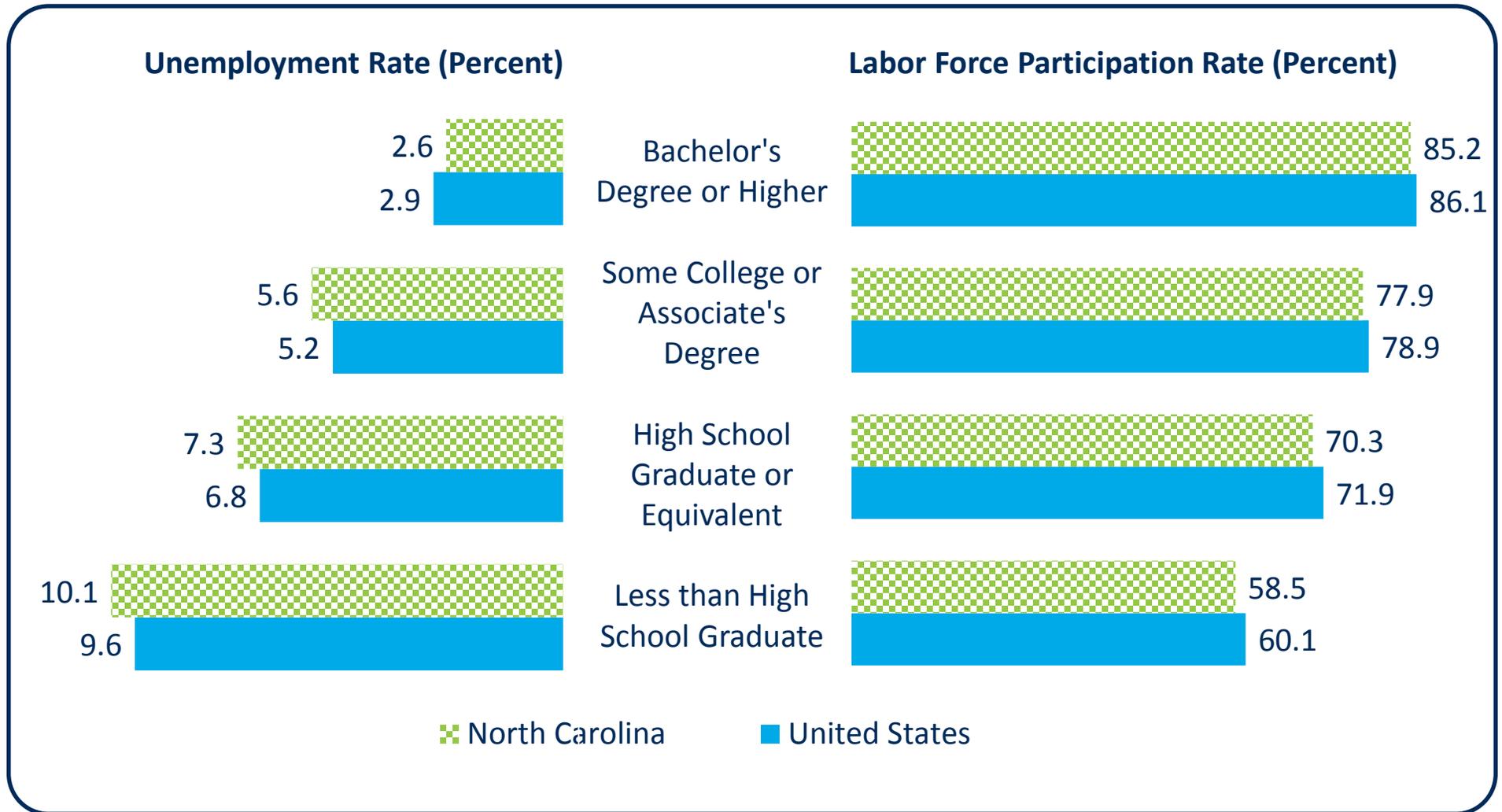
Source: Bureau of Labor Statistics

...and payoffs to skills have steadily increased



Source: Bureau of Labor Statistics

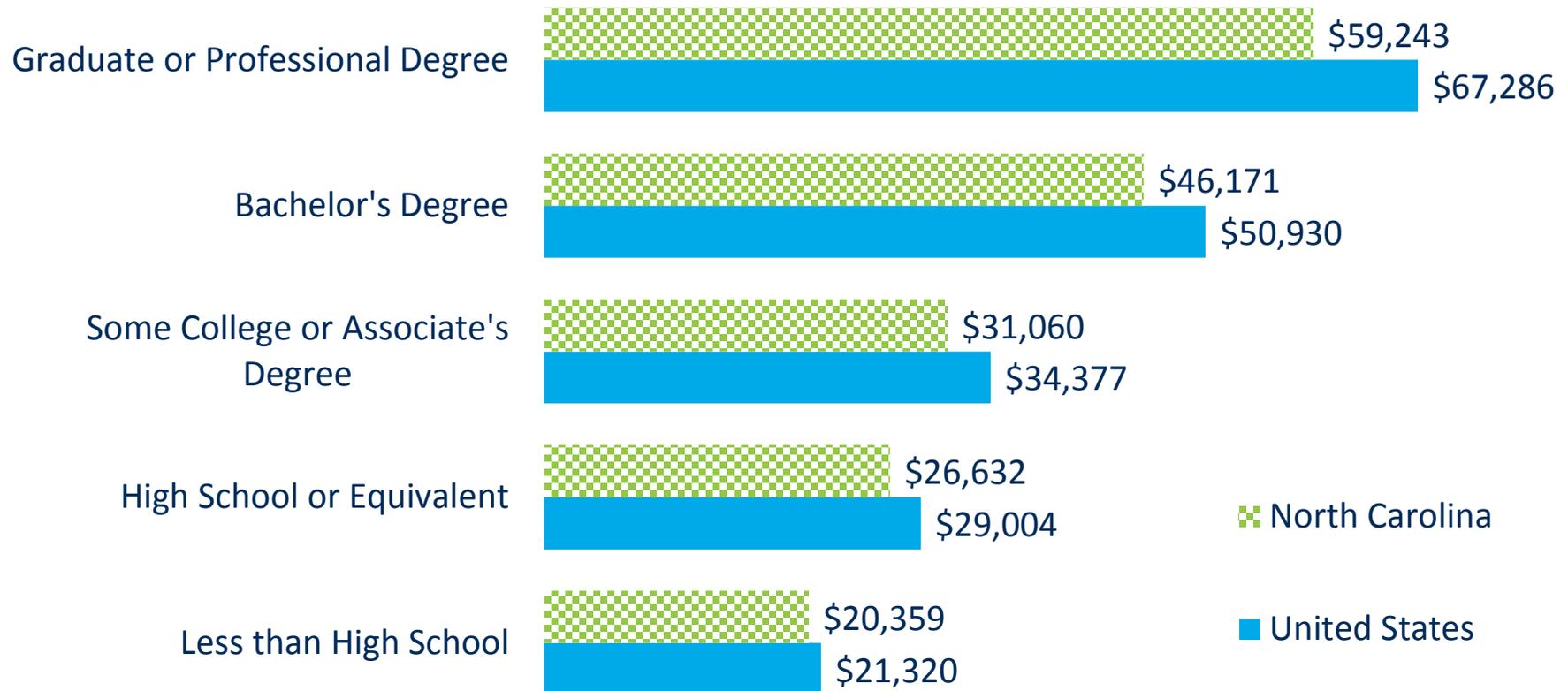
Recent Breakdown of Unemployment and Labor Force Participation



Source: Federal Reserve Bank of Richmond (2015). Educational Attainment in North Carolina.

Finer Recent Breakdown of Earnings

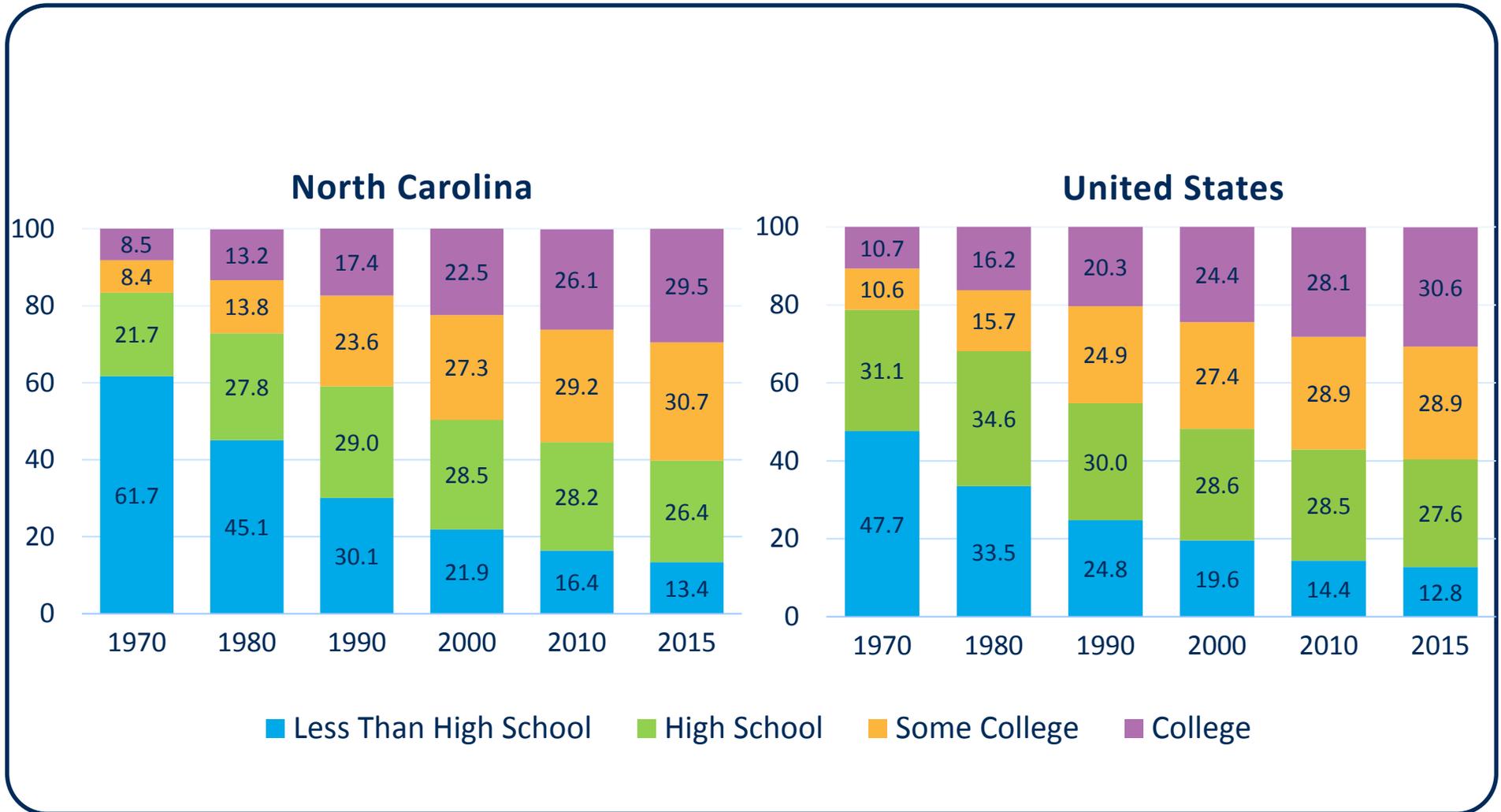
Median Earnings



Source: Federal Reserve Bank of Richmond (2015). Educational Attainment in North Carolina.

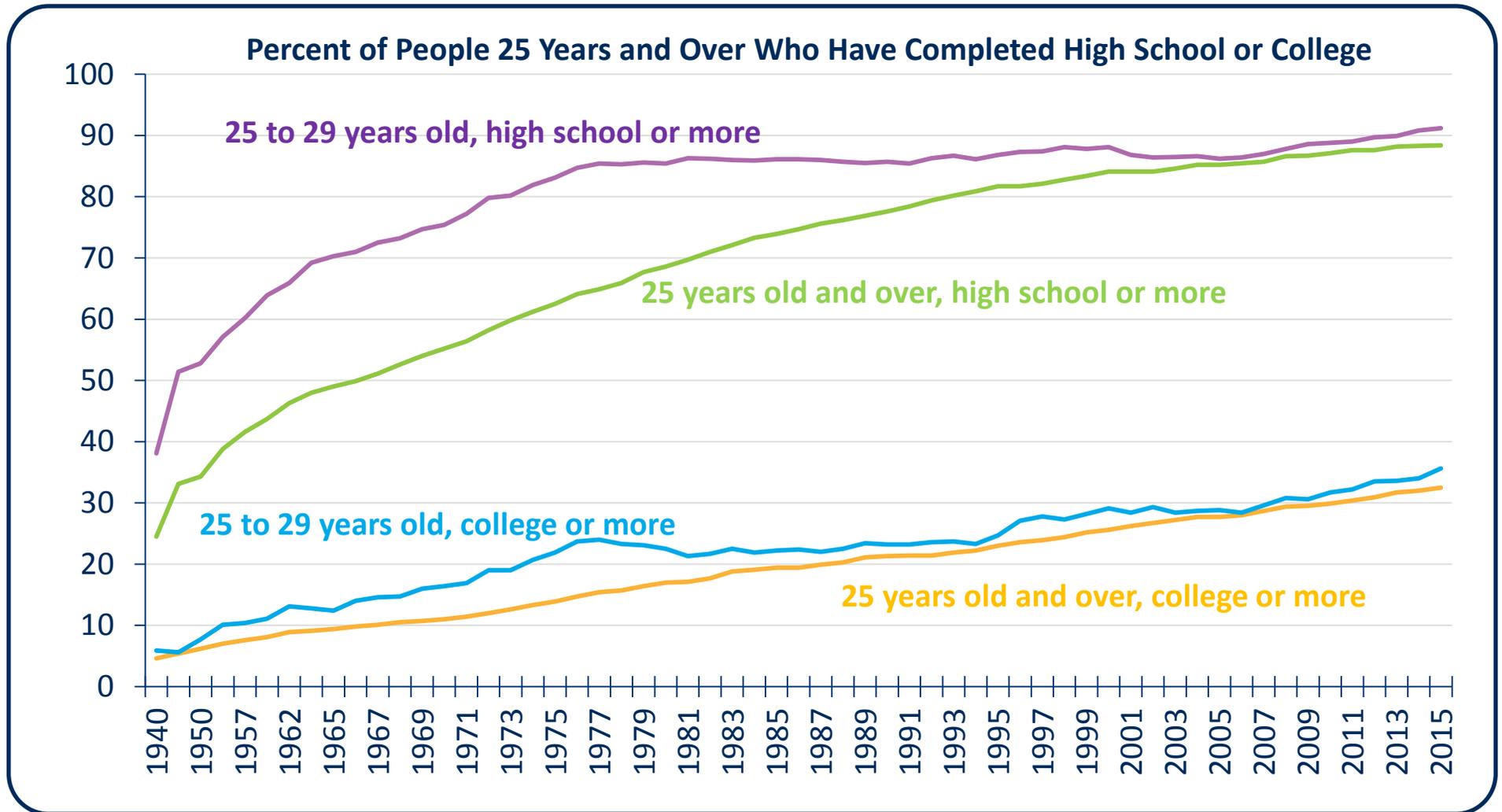
Skills: The Response

We have been getting more educated...



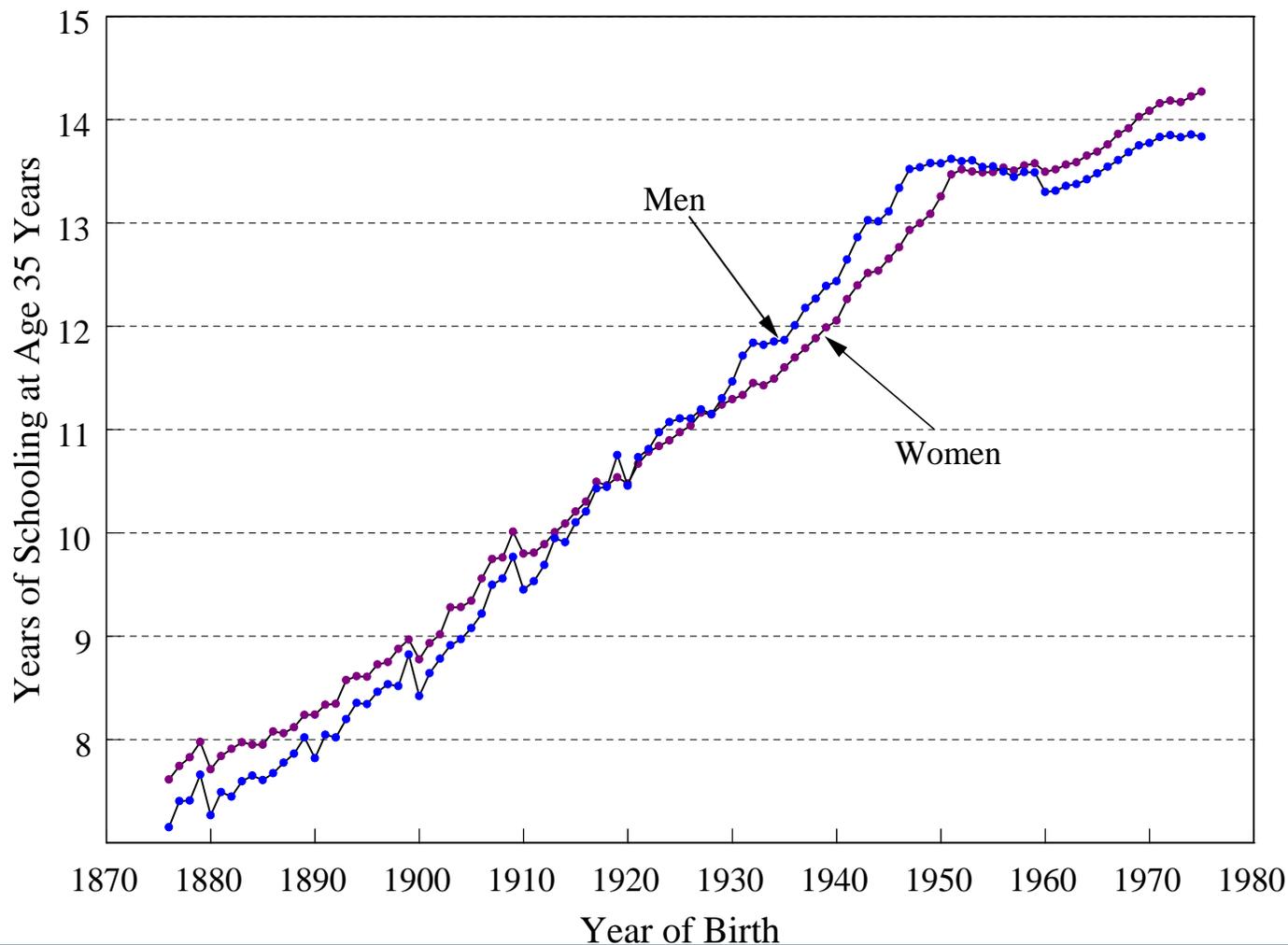
Source: Federal Reserve Bank of Richmond (2015). Educational Attainment in North Carolina.

...but are we hitting a barrier?



Source: Current Population Survey

Since the 1970s, supply response to skill-biased technological change has been weak. Unprecedented.



Source: Goldin and Katz (2009)

“An Unfinished Transformation”

- College graduation rates for young men born in the mid-1970s are similar to those for men born in the late 1940s
- The educational attainment of 30-year-olds increased by only 0.8 years between 1980 and 2005
- Many who enroll do not complete any degree within six years of completing high school.
- “Some college, no degree” is the fastest growing educational category in past 30 years: roughly 15% in 1980 to 29% in 2015

Sources: Goldin and Katz (2009) and Federal Reserve Bank of Richmond (2015) Educational Attainment in North Carolina

Why hasn't skill acquisition responded?

- Proximate answer appears to be that U.S. students lack adequate **information** and **preparedness** for higher education
- Under current collegiate preparedness, **college earnings premium** no longer an effective spur to educational attainment
- Preparedness is determined **early** in life: “learning begets learning”

What about information?

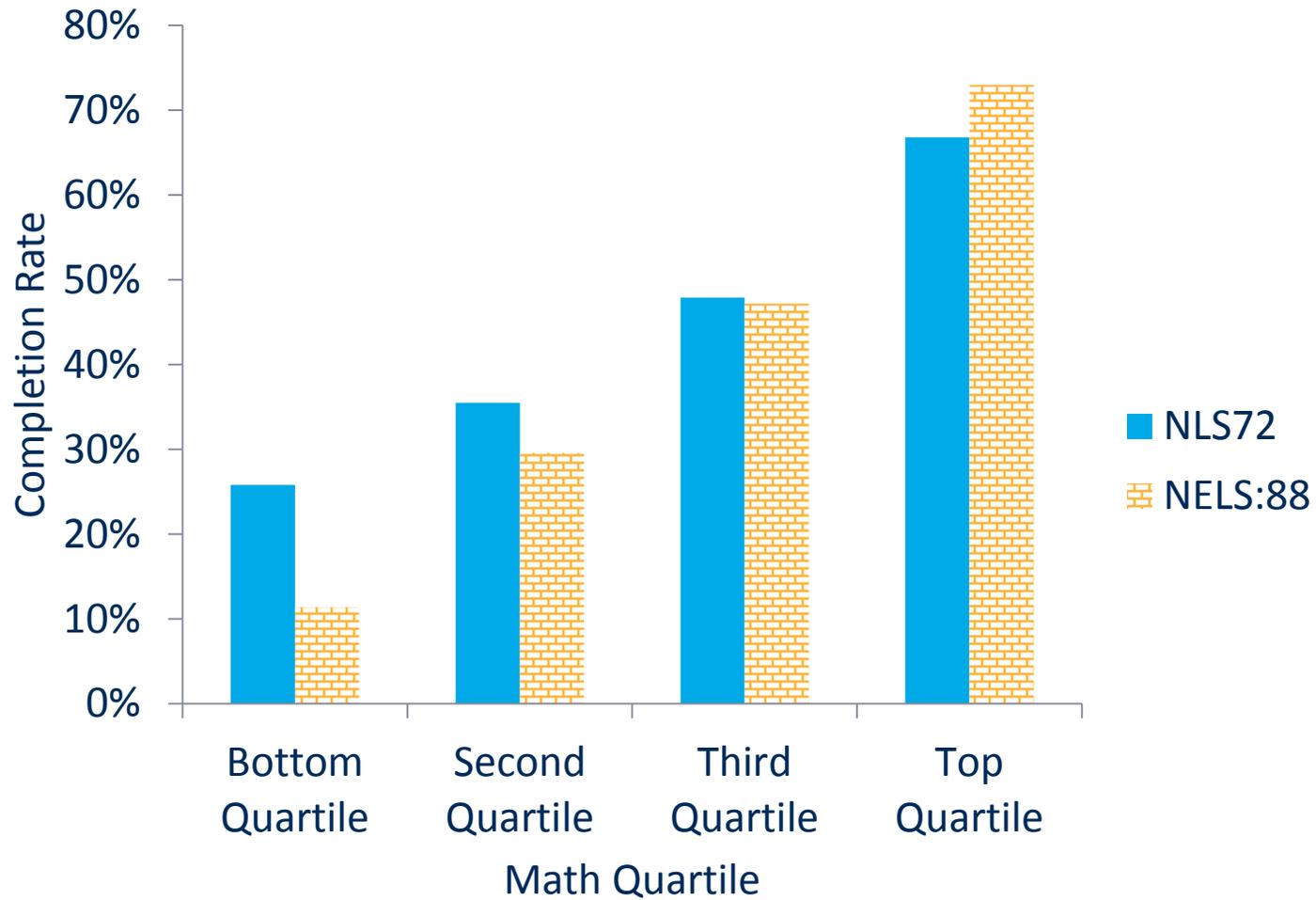
Expected Attainment	No Degree	% of No Degree with Loans	Student Loan Debt (borrowers with no degree)
Certificate	52%	37%	\$11,160
Associate's degree	62%	39%	\$10,758
Bachelor's degree	38%	51%	\$14,457

Note: Data reflect survey results from 2004-2009.

- Students appear to both:
 - overstate their own preparedness and ...
 - ...understate its importance—relative to study effort—in college completion

Source: Avery and Turner (2012) and Stinebrickner and Stinebrickner (2012)

What about preparedness?



Source: Bound, Lovenheim and Turner (2010)

So why isn't the college earnings premium enough?

- Modestly prepared students already enroll and will continue to do so at higher college premia
- Those not already enrolled in college face both substantial failure risk and earnings risk after graduation
 - Risks attenuate the benefit of the college premium, so at-risk students rationally ignore it
 - For low-wealth households, student loans are scary
- Punchlines
 - Under the status quo, aggregate college attainment will likely remain stagnant
 - Skill-biased technical change will primarily increase economic inequality, not college attainment

Source: Athreya and Eberly (2016)

Enter early childhood...

- Preschool programs have been shown to positively impact education, employment, and earnings later in life
- They have also been shown to boost achievement test scores
 - A substantial portion of this boost is explained by improvements in personality skills
- Early childhood education appears to matter for hard *and* soft skills

Source: Heckman et al (2013)

Conclusion

- Skills are being rewarded at historically high rates
- People are responding by enrolling in college, but many are not completing
- Targeting people early in life appears to be key to overcoming this challenge

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Educational Attainment in the Fifth District

The Census Bureau's annual American Community Survey includes information on educational attainment by a variety of economic and demographic factors. These reports provide graphs, maps, and tables that visualize select variables using the most recent data available.

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Risk, the College Premium, and Aggregate Human Capital Investment (Revised November 2016)

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Source: www.richmondfed.org