

Commission on Innovation and Excellence in Education



What It Will Take For Maryland To Compete With The Best Education Systems in the World

**Marc Tucker
National Center on Education and the Economy**

November 2016

PART 1



*WHY IT IS VERY IMPORTANT TO SEE
WHERE WE STAND IN RELATION
TO THE REST OF THE WORLD*

NCEE Community College Research



- 2 ½ years of research on what it takes to succeed in 1st year of typical Community College
- Looked at the eight most popular CC programs, covering 80% of the programs of study
- Analyzed reading level of most popular textbooks and topics covered in 1st year math
- Talked with instructors

NCEE Community College Research



- Reading level of texts at 12th grade level
- Typical high school text now at 7th-8th grade level
- “College Math” is Algebra I, and many cannot do it
- High school grads command of middle school math very shaky and instructors report their writing is weak
- ACT told us that predictions for college success pretty much the same for 4- year colleges as for 2-year colleges

The Truth About College Readiness

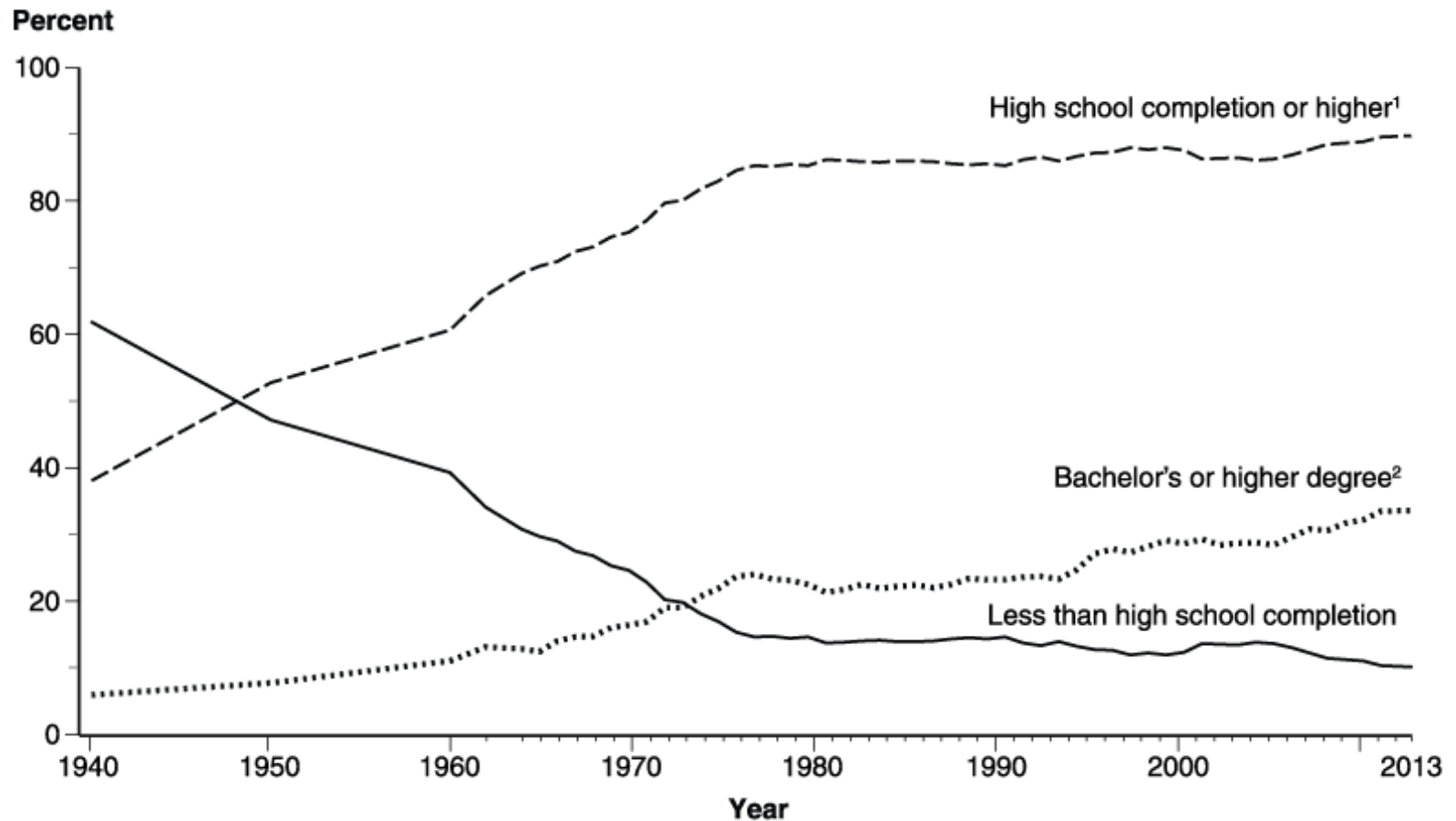


- Most college-bound high school grads are not going to college—they are enrolling in very expensive high schools
- A large fraction are not ready for that high school program
- Either way, they are not ready either for college or work
- HOW DID WE GET HERE?
- HOW DOES THAT PICTURE COMPARE TO OTHER COUNTRIES' SYSTEMS?

Attainment: The Last 70 Years



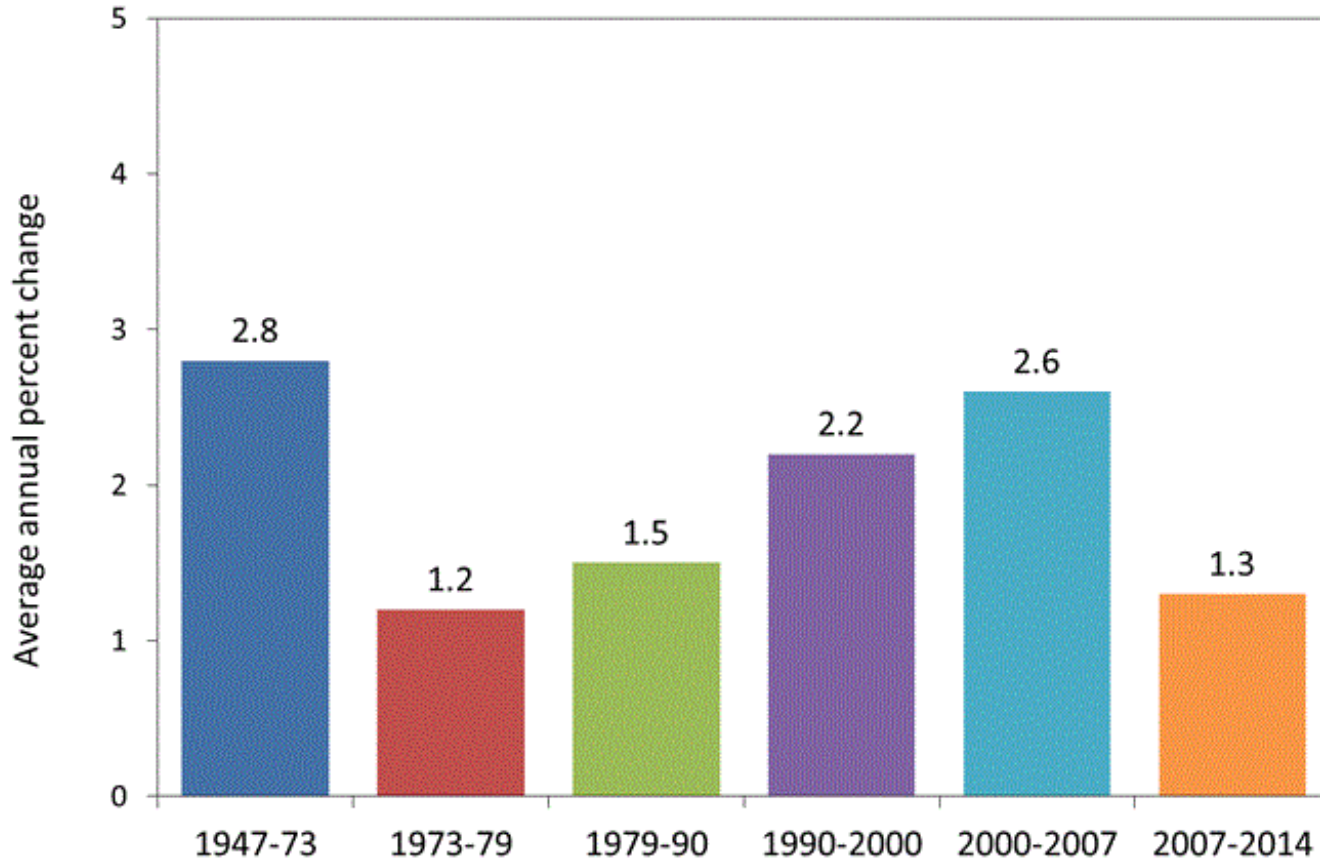
Figure 4. Percentage of persons 25 through 29 years old, by highest level of educational attainment: Selected years, 1940 through 2013



Labor Productivity: The Last 65 Years



Productivity change in the nonfarm business sector, 1947-2014

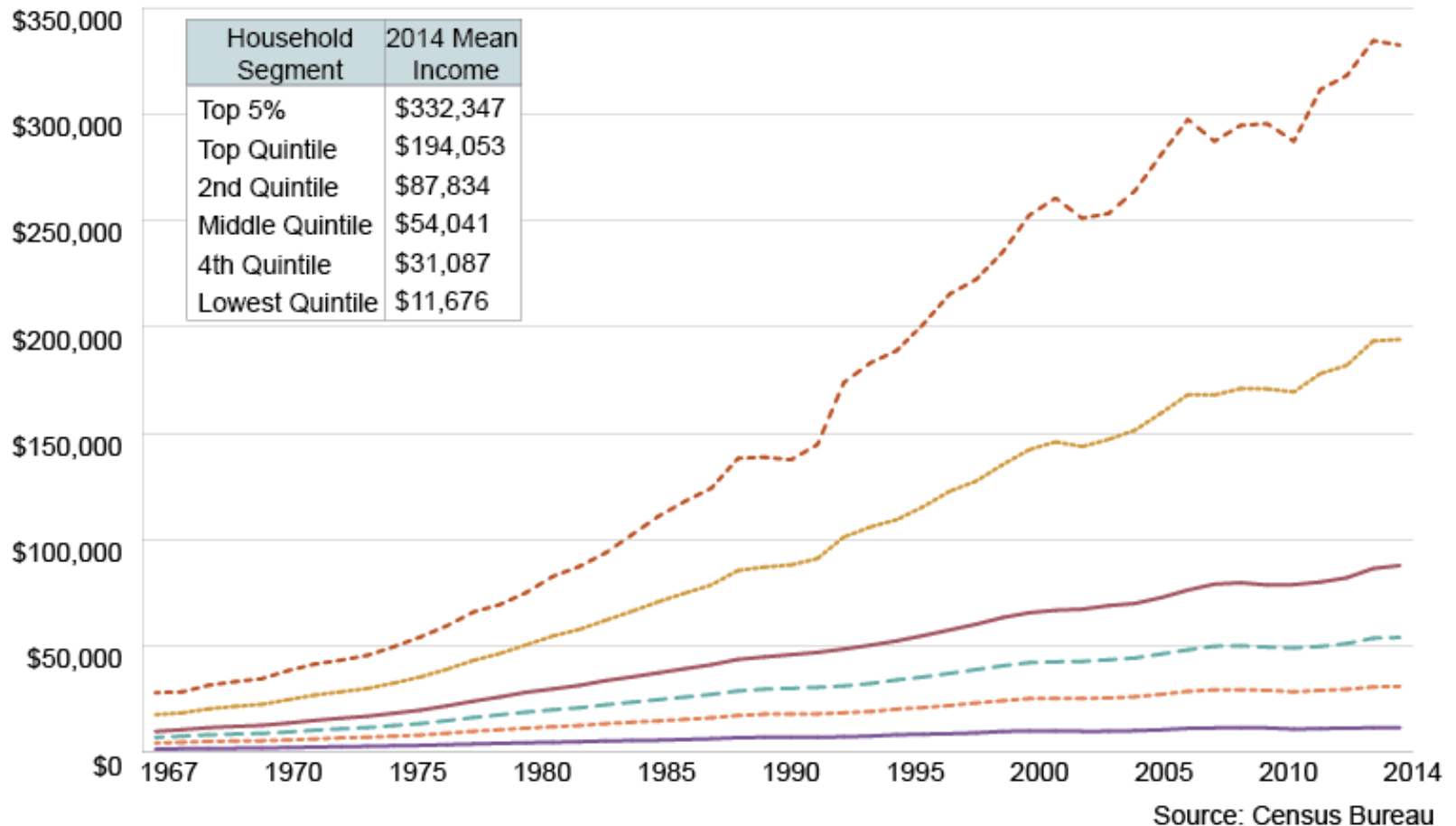


Source: U.S. Bureau of Labor Statistics

Income Distribution: The Last Half Century



Mean (Average) Household Income by Quintile and Top 5%



The 1970s: Crucial Turning Point



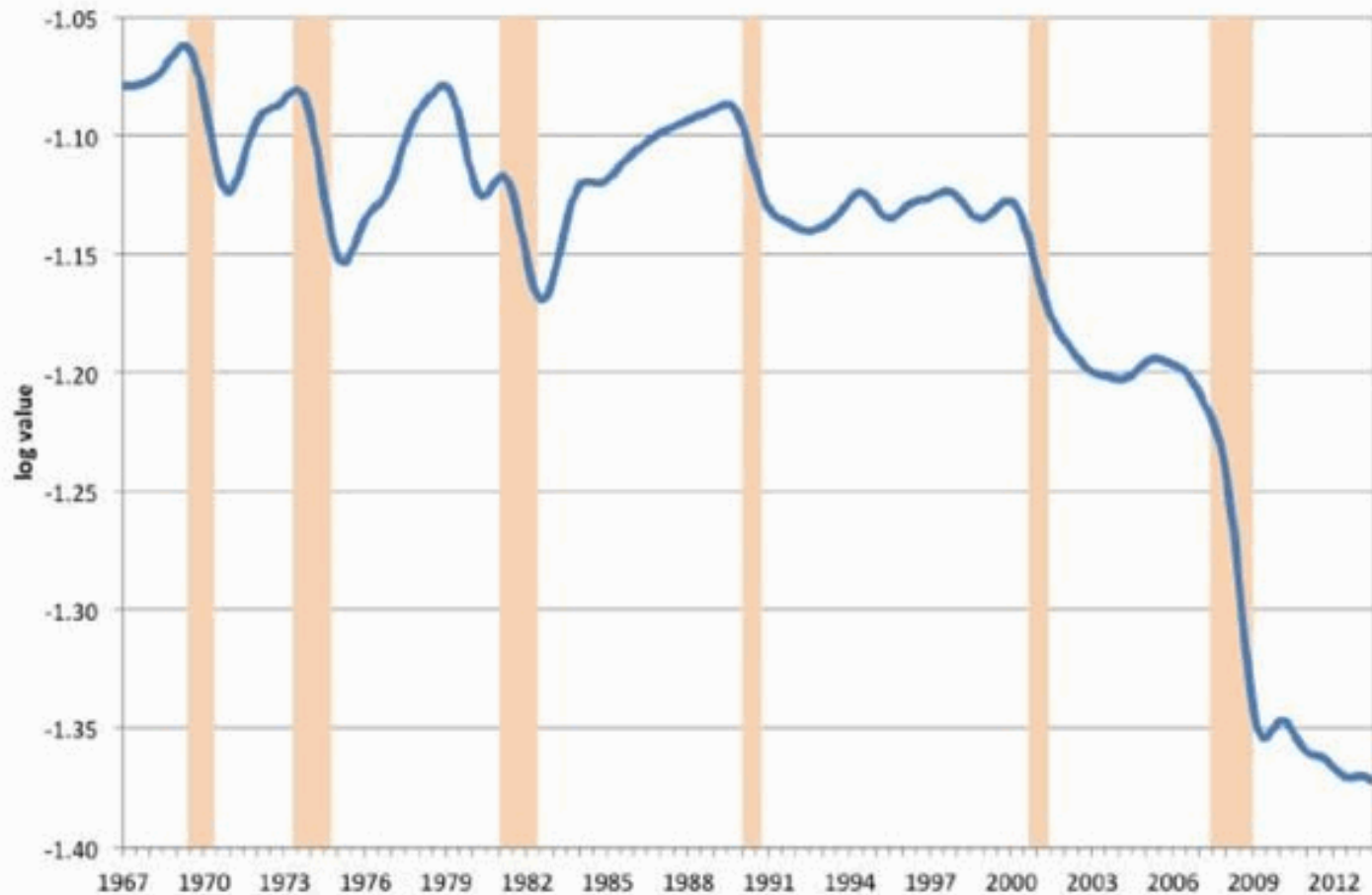
- From mid-19th century to 1970s:
 - US paces the rest of the world in attainment
 - Steady growth in productivity
 - Sustained growth
 - *Most even* distribution of income in industrialized world
- But, starting in the 1970s:
 - Attainment growth *stops*
 - Productivity growth *slows*
 - Family income *flattens*
 - Distribution of income becomes *least* equal

From the 1970s: Global Labor Markets, Advancing Automation



- Low wage competition
 - Low skill
 - High skill
 - All skill levels
- Automation of jobs involving routine work
- **VAST EXTINCTION OF LOW-SKILL, LOW-WAGE ROUTINE WORK IN HIGH WAGE COUNTRIES**

Employment in Routine Occupations, 1967-2013



Data from the Bureau of Labor Statistics, Current Population Survey; See Jaimovich and Siu (2012).

How the US Responded — Reform Agenda Since 1970's

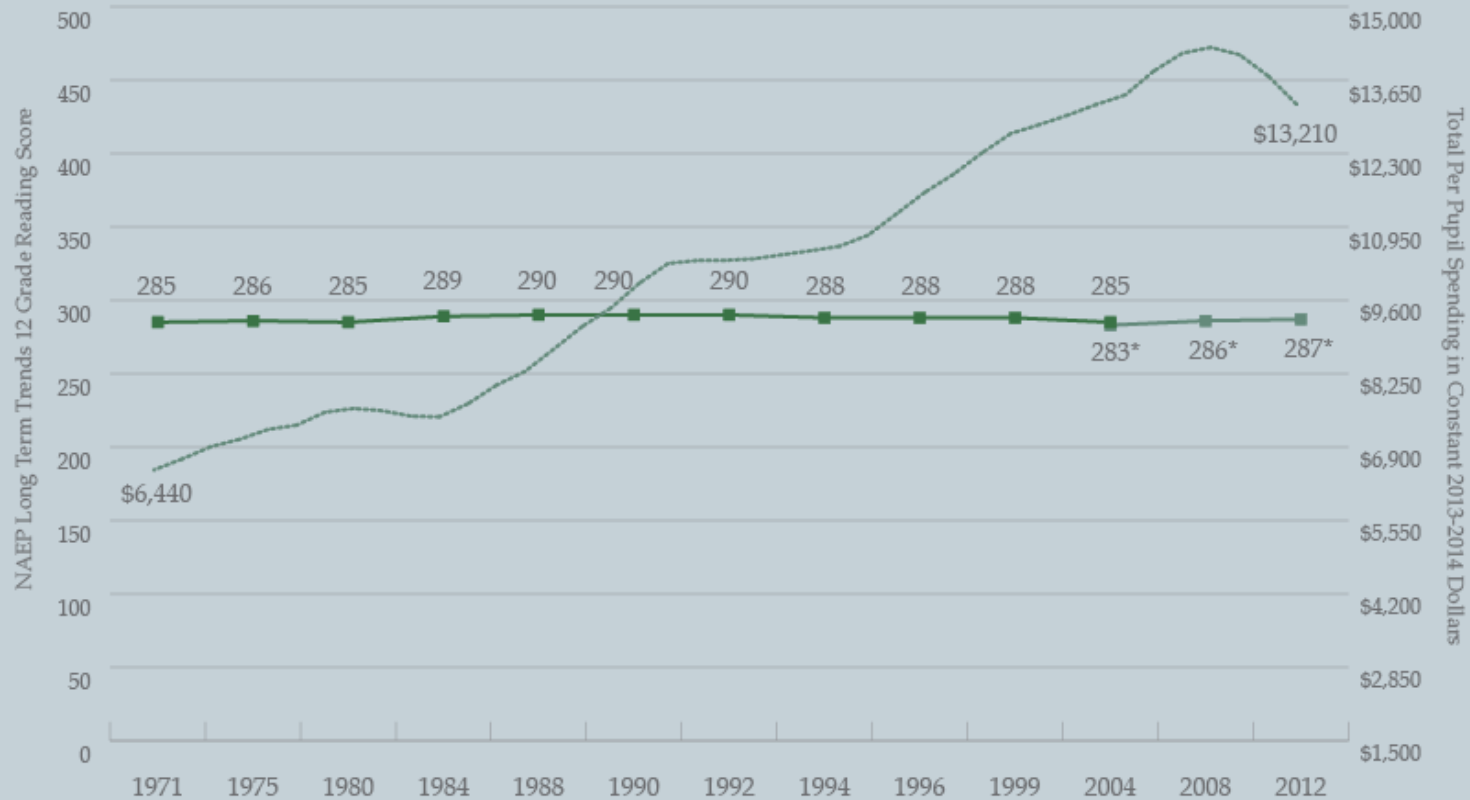


- More money (more than 250% growth in last 20 years)
- Lower class size
- School competition (charters and vouchers)
- Technology
- Tough test-based teacher-accountability systems

What We Spent; What We Got For It



Per Pupil Spending and NAEP 12 Grade Reading Scores, 1971 to 2012



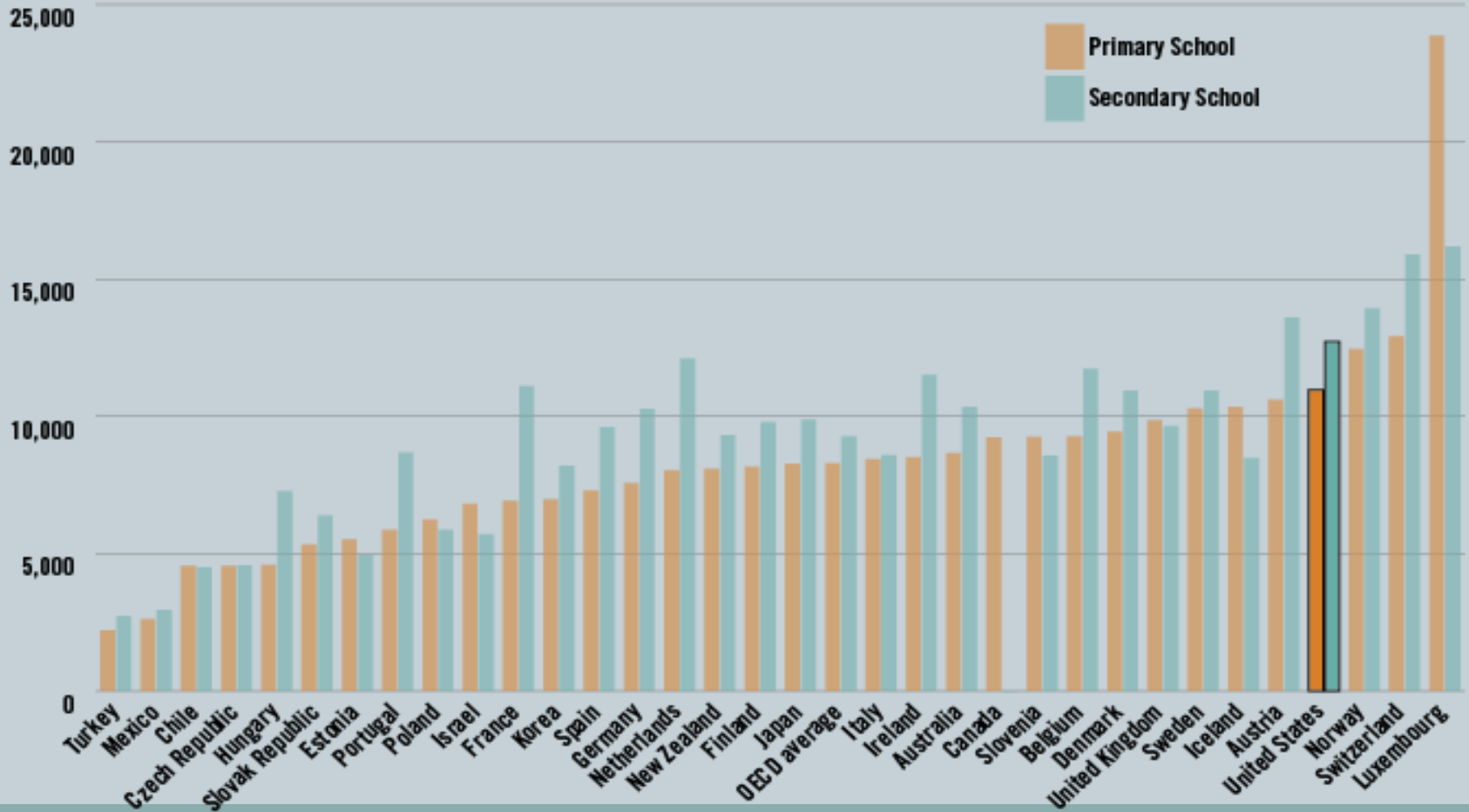
*Revised assessment format

Sources: The Nation's Report Card "NAEP 2012 Long-Term Trends in Academic Progress"
 NCES Digest of Education Statistics 2014

Spending Per Student

Per Pupil Expenditure by Country, 2011

Primary and secondary education, all services



Source: OECD Education At a Glance

Their Model vs. Our Model: The Results



US Rankings on PISA

	Reading	Mathematics	Science
2000 (32)	15	19	14
2003 (41)	18	28	22
2006 (57)	NR	34	28
2009 (65)	17	30	22
2012 (65)	24	36	28

U.S. Workforce Skills (PIAAC*)



- OECD survey of the skills of all U.S. workers
 - Reading: Average
 - Numeracy: Near the bottom with Ireland, Spain & Italy
 - Digital Problem Solving: Dead Last
- ETS analysis of 16 to 34-year-olds in survey
 - At or near the bottom in reading, numeracy & problem solving
- U.S. scores *declined* since last PIAAC survey

*Program for the International Assessment of Adult Competencies, OECD

Maryland's Choice: High Skills or Low Wages



- All states and countries can be competitive in this new environment by either:
 - Lowering wages or
 - Raising skills
- U.S. has not decided which goal to embrace
- Countries with highest performing education systems have chosen high-value-added, high skill, high wage option
- If you choose that option, you will need a world-class workforce, educated to global standards

Our Competitors Had a Different Analysis



- Did not double down on the old model (inexpensive teachers; low standards), designed to produce majority of graduates with little more than an 8th grade level of literacy
- Knew the jobs available to the grads of that system would be increasingly unemployable
- Decided that they had to provide to virtually all a kind and quality of education until then available only to their elites—for no more money than the old model
- That required a **WHOLE NEW DESIGN**

HOW THE TOP PERFORMERS GOT TO THE TOP



THE 9 BUILDING BLOCKS FOR A WORLD-CLASS STATE EDUCATION SYSTEM

Education Reform Agenda of Top Performers



1. Strong supports for children and their families

- ✓ Comprehensive supports for families with young children, from family allowances to prenatal care to nutritional assistance and more
- ✓ Full affordable day care, preschools, early childhood education
- ✓ Additional services for low-income, vulnerable families
- ✓ Well established in Europe, advancing in Asia

Education Reform Agenda of the Top-Performers



2. More resources for students who are harder to educate

- ✓ US only advanced country in which children of the wealthy get more financial support than children of the poor
- ✓ More teachers per student and, in some cases, the best teachers, in schools serving disadvantaged students
- ✓ Comprehensive additional services for disadvantaged students, in and out of school

Education Reform Agenda of the Top-Performers



3. *World-class, highly coherent instructional systems*

- ✓ Internationally benchmarked student performance standards
- ✓ Matching curriculum frameworks
- ✓ State course syllabi based on frameworks
- ✓ High quality, essay-and-open-ended-type exams based on syllabi

Education Reform Agenda of the Top-Performers



- 4. *Qualification systems with multiple no-dead-end pathways for students to achieve those qualifications***
- ✓ No high school diploma
 - ✓ Requirements at end of each stage match the requirements for beginning next stage
 - ✓ No dead ends, many opportunities to change direction, combine qualifications

Education Reform Agenda of the Top-Performers



5. Abundant supply of highly qualified teachers

- ✓ Recruit most teachers from upper segment of high school graduates (top half to top 5%)
- ✓ Moving teacher ed into research universities
- ✓ Entrance requirements those of selective research universities
- ✓ Elementary teachers specialize
- ✓ Tough content, pedagogy, research req'ts

Education Reform Agenda of the Top-Performers



- 6. *Schools organized and managed to attract high quality candidates into teaching and to enable them to do their very best work***
- ✓ Y-shaped career ladder for teachers and school leaders—strong incentives for teachers to get better and better at the work
 - ✓ More time working together in teams to improve school performance, less teaching
 - ✓ Strong continuous improvement system

Education Reform Agenda of the Top-Performers



7. An effective system of career and technical education and training

- ✓ Built on very high level of student academic performance
- ✓ Strong apprentice component; training wage
- ✓ Strong employer involvement
- ✓ Highly qualified instructors, modern equipment
- ✓ No dead ends

Education Reform Agenda of the Top-Performers



8. Leadership development system that develops leaders who can manage such systems effectively

- ✓ This is recent development, most systems catching up on this
- ✓ Only those who have been fine teachers, team leaders and mentors can go on to leadership positions
- ✓ Pool groomed, opportunities for growth and mentoring provided; must have experience in low-income and minority schools to go up

Education Reform Agenda of the Top-Performers



9. *Coherent governance system capable of implementing effective systems at scale*
 - ✓ Roles at each level clear and complementary
 - ✓ Clear where the buck stops
 - ✓ Built on professional model
 - ✓ System sets the rules, provide resources, professionals have professional discretion
 - ✓ Accountability runs up and down

Why We Get So Little for the Money We Spend



- Low quality model is immensely costly
 - Hiring cheap, poorly educated teachers: high attrition rates, less expertise developed, demand for lower class sizes, low morale, more supervision, greater student waste
 - Giving up on students early: endless remediation
- Little of the budget gets to the school
- Half of our spending on the handicapped is wasted
- Far too much is spent on physical facilities
- Funding is post holed, accountability compromised

Education Reform Agenda of the Top-Performing Countries



Most important:

All the parts and pieces support one another
do not work at cross purposes, as in the U.S.

Policy-making focuses on the system, not
bullets.

The Bottom Line



- Get first rate teachers in front of every student
- Set very high expectations for all students, teachers
- Create a first rate curriculum
- Make sure you are measuring the right stuff
- Treat your teachers like professionals
- Give them good leadership and plenty of support
- Get the incentives right
- Spend your money for maximum return
- Never, never, never give up on the students

Thinking About Maryland



- One of the most affluent states in U.S.
- Very high per pupil expenditure, average on equalization
- Above average on attainment, but average on SAT, NAEP
- Wide gaps between advantaged and disadvantaged
- Behind world's top performers
- Like nation, high cost, relatively modest performance

Thinking About Maryland



- **Strengths to build on:**
 - High spending level
 - P-20 Leadership Council
 - Relatively streamlined governance and lines of authority
 - Strong citizen support for education
 - Foundation laid for strong for early childhood education

Thinking About Maryland



- **Strengths to build on:**
 - Adoption of the Common Core curriculum
 - Adoption of PARCC
 - Adoption of high school graduation tests
 - Fewer teachers colleges for state this size than many others
 - Initial steps on career ladders, incentives for highly qualified
 - Recent interest in career and technical education

What You Will Need



- **Broad consensus on goals**
 - Broadly shared prosperity
 - Competing on quality of products and services, not wages
 - Need to provide elite level of education for everyone
 - Need for a genuinely world-class education system

What You Will Need



- Understand strategies used by top performers
 - Go there-seeing is believing
 - Copy no one...build on all
- Understand the gaps between MD and global best
- Build a broadly supported long-range plan
- Build a bipartisan, coalition for long term
- Get started where the prospects for success are best

In Closing...



THANKS!

For more information:

Center for International Education Benchmarking

National Center on Education and the Economy

www.ncee.org/cieb