

Strengthening Community Colleges' Influence on Economic Mobility

presentation to

The Federal Reserve Bank of San Francisco Conference:
Creating and Employing a Skilled Work Force:
Challenges and Opportunities

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New Horizons Economic Research



Topics discussed

Part I: The impetus to improve academic preparation and lower post-secondary cost

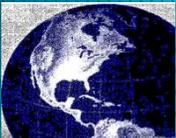
- College attendance in the US and Florida
- How HS preparation affects educational attainment
- How educational attainment affects earnings

Part II: The impetus to more carefully select field-of-study

- How postsecondary field-of-study affects earnings
- Which high-return fields-of-study:
 - ✓ Are easily completed by students who did not perform well academically in high school
 - ✓ Require acquiring only one or two years' of credits.

Part III: How to increase community college ROI (return-on-investment).

- ✓ Expand career counseling and assessment.
- ✓ Tie funding to benefits and costs.



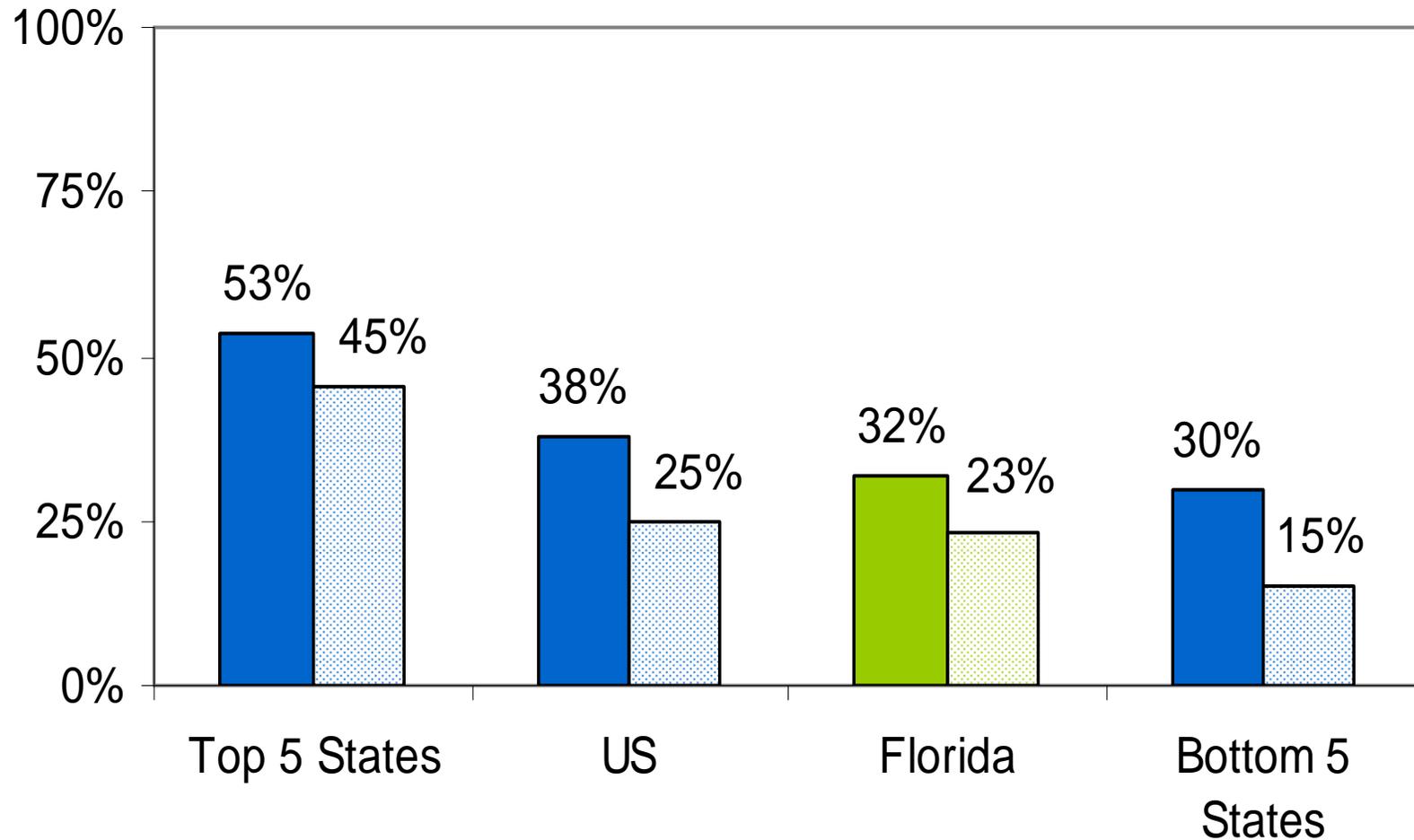
Data

- ▶ The first two slides use published data.
- ▶ The remaining slides use a special longitudinal database covering 135,000 students in the Florida public high school class of 2000.
- ▶ For each student the database includes:
 - HS transcripts 1995–2000.
 - Demographics including receipt of Free and Reduced Price Lunches (FRLs) in 8th grade (as a measure of low-income).
 - College transcripts 1995–2007.
 - College Credentials.
 - Quarterly UI wage-record data 1995–2007.



College attendance across the states

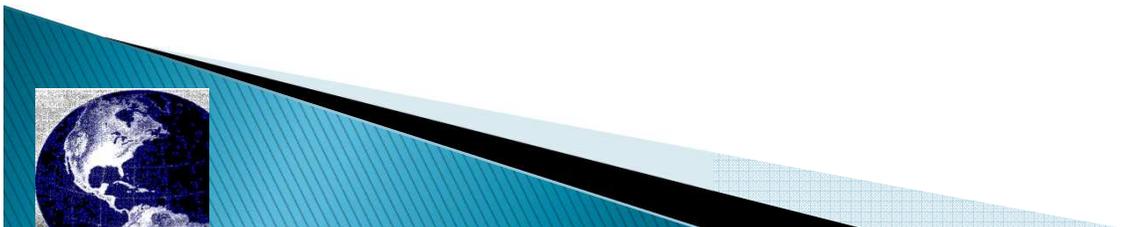
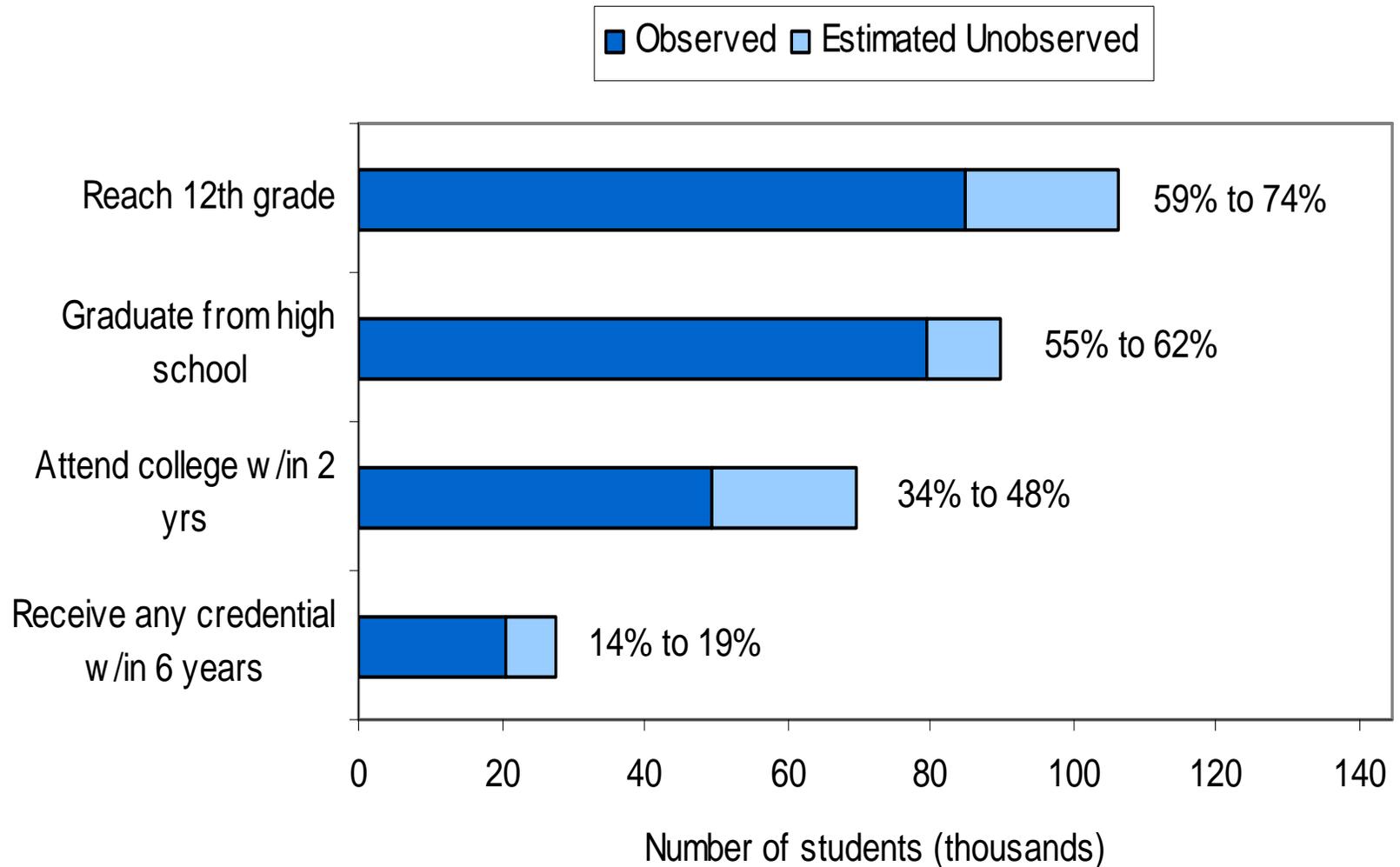
Percent of 9th Graders Continuing to College, 2000



Solid bar = All Students

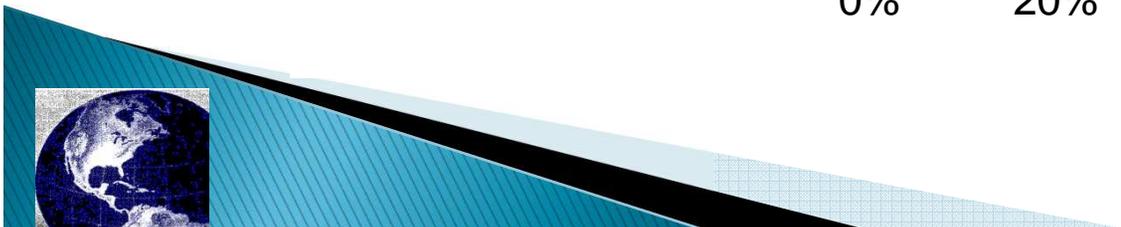
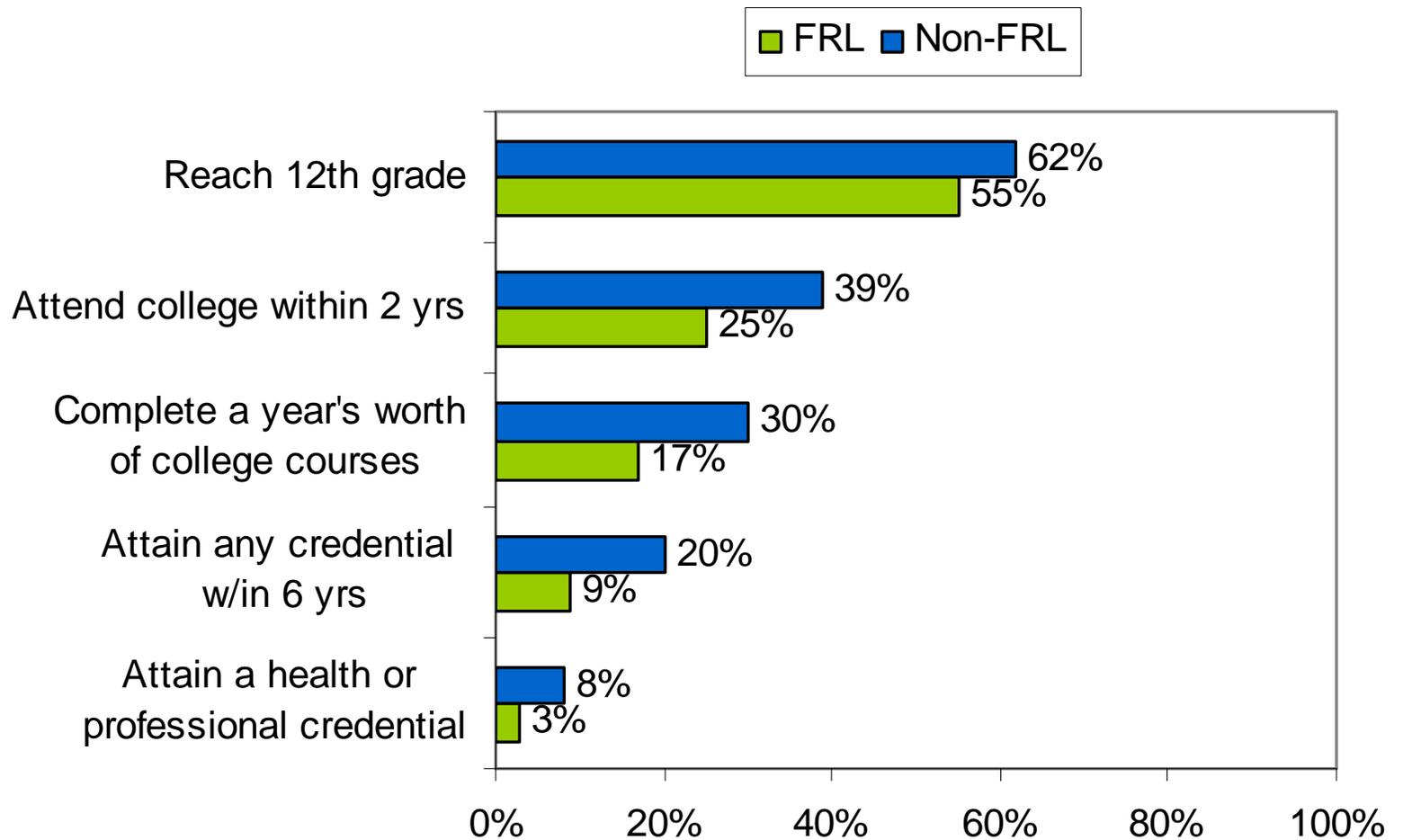
Shaded bar = Low-Income Students

Educational outcomes in FL



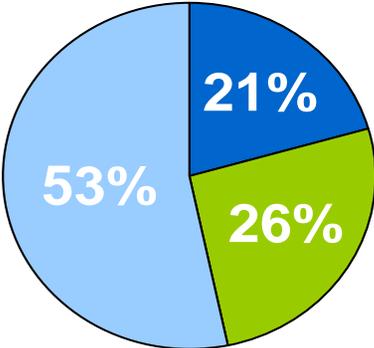
Educational outcomes in FL for low-income students

(FRL = free and reduced price lunch)

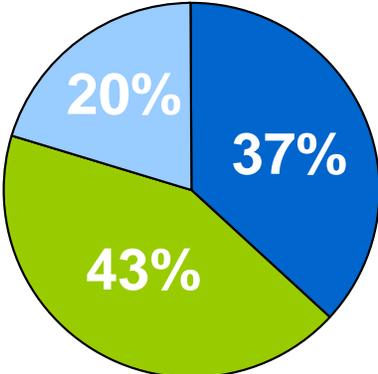


HS-GPA strongly affects entering and completing Florida public college programs

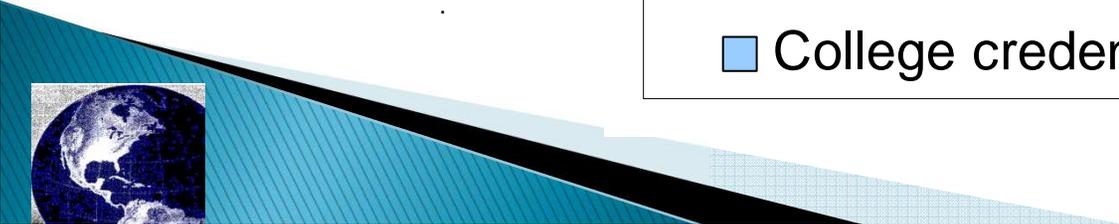
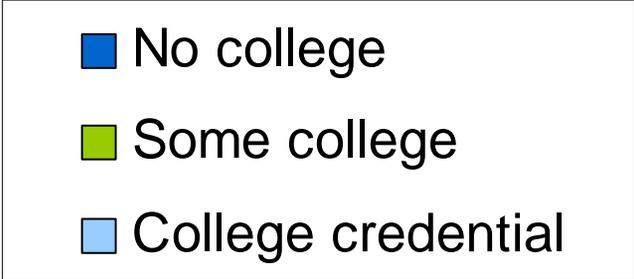
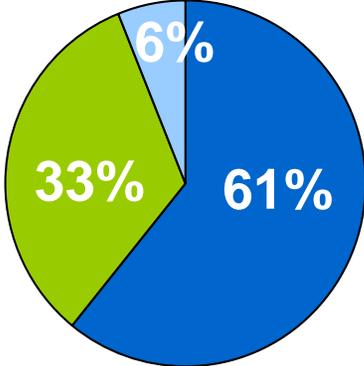
A Student



B Student

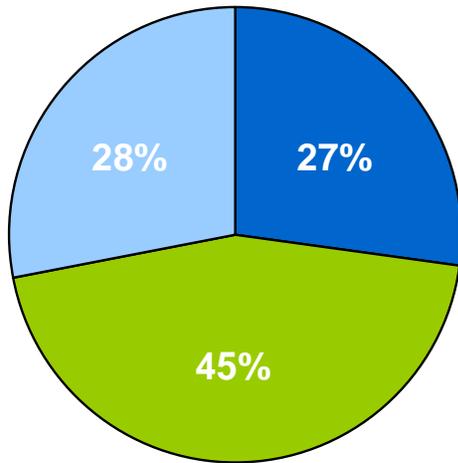


C or below Student

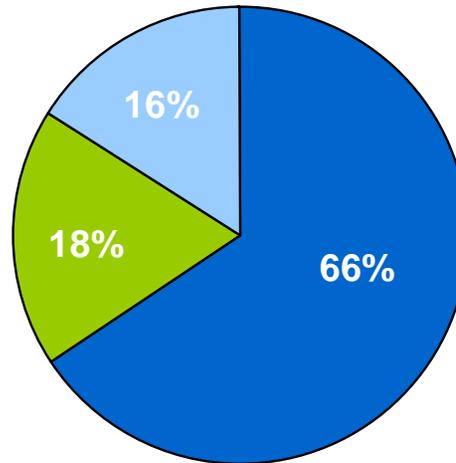


HS-GPA strongly affects type of college attended

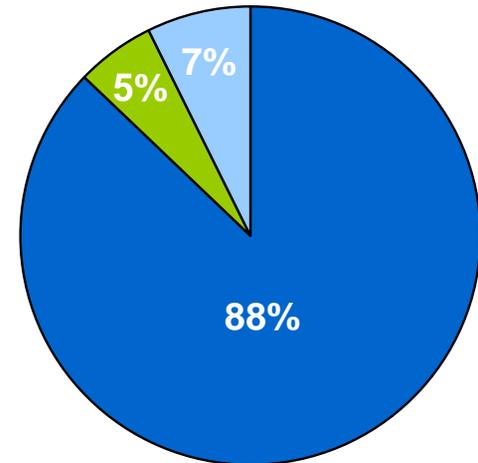
A Student



B Student



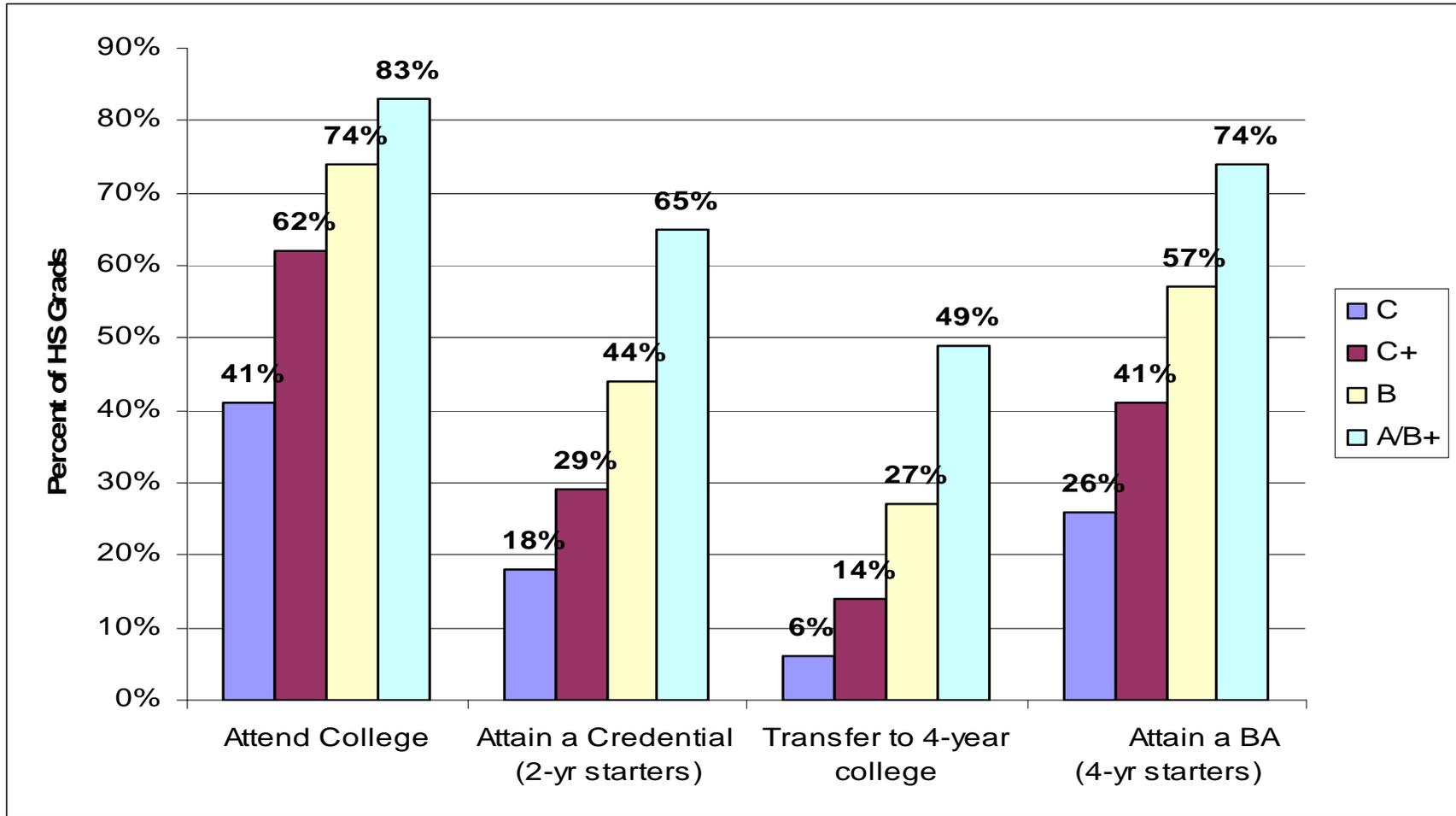
C or below Student



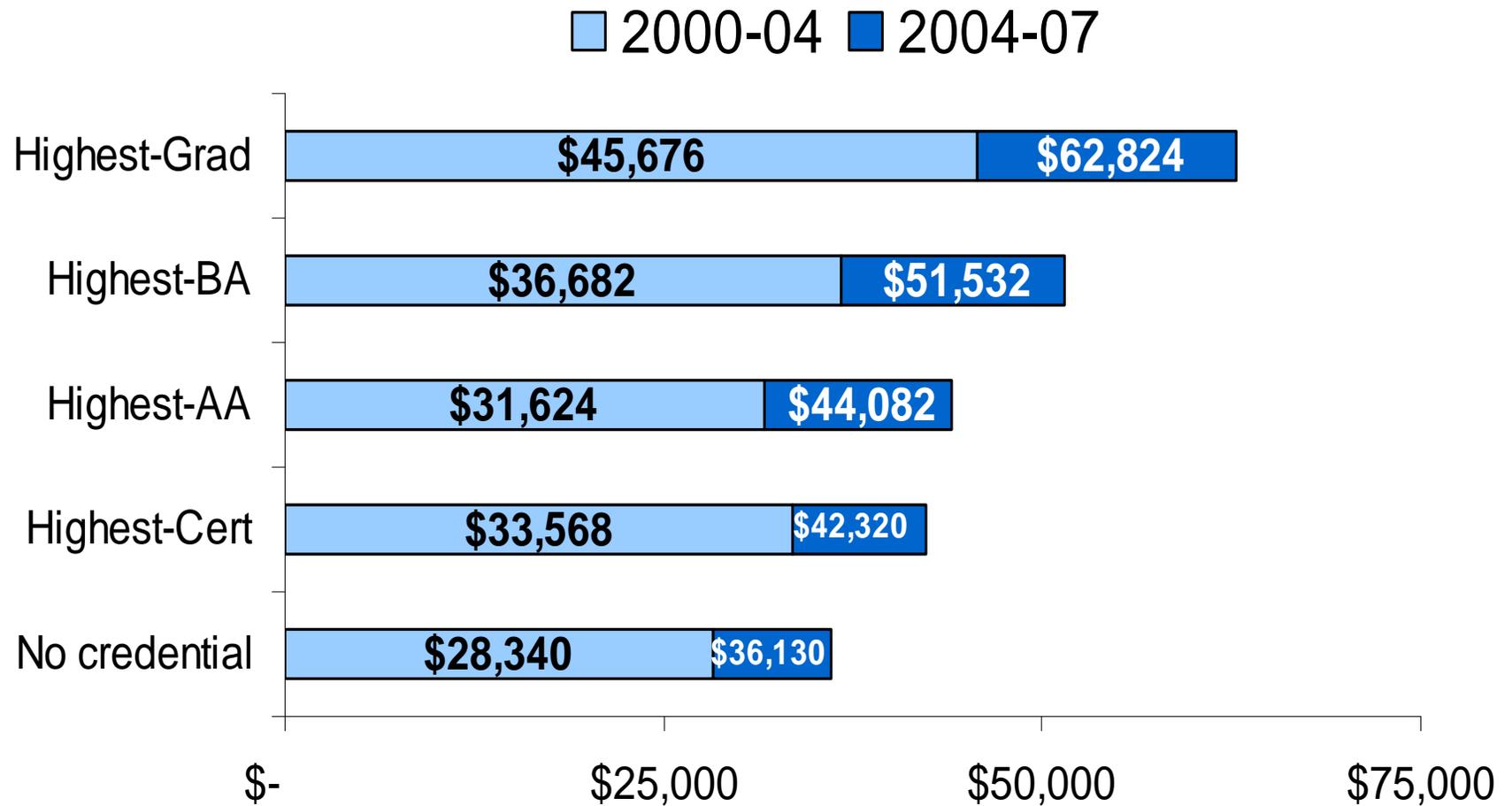
■ Attended 2-yr college directly ■ Transfer 2-yr to 4-yr ■ Attended 4-yr college directly



HS-GPA Strongly Affects College Outcomes



Credentials Strongly Affect Earnings



Highest annual earnings for students leaving college and working full time.



Two ways to Strengthen Community Colleges' Influence on Economic Mobility

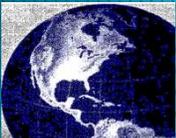
- ▶ **Improve academic performance of students at each education stage:** Pre-K, Elementary , Secondary, Postsecondary
- ▶ Notable example: No Child Left Behind
- ▶ Outcome: Modest improvement in test score in some states based on the National Assessment of Educational Progress
- ▶ Key issue: Goal is to improve skills to 10th grade level needed for a high school diploma, not to 12th grade level to complete college.
- ▶ **Make postsecondary education affordable for high-performing low-income students.**
- ▶ Notable example: Pell Grants
- ▶ Outcome: Makes college affordable for students from low-income families
- ▶ Key issue: Loans are required to pay for tuition, room, and board at selective universities



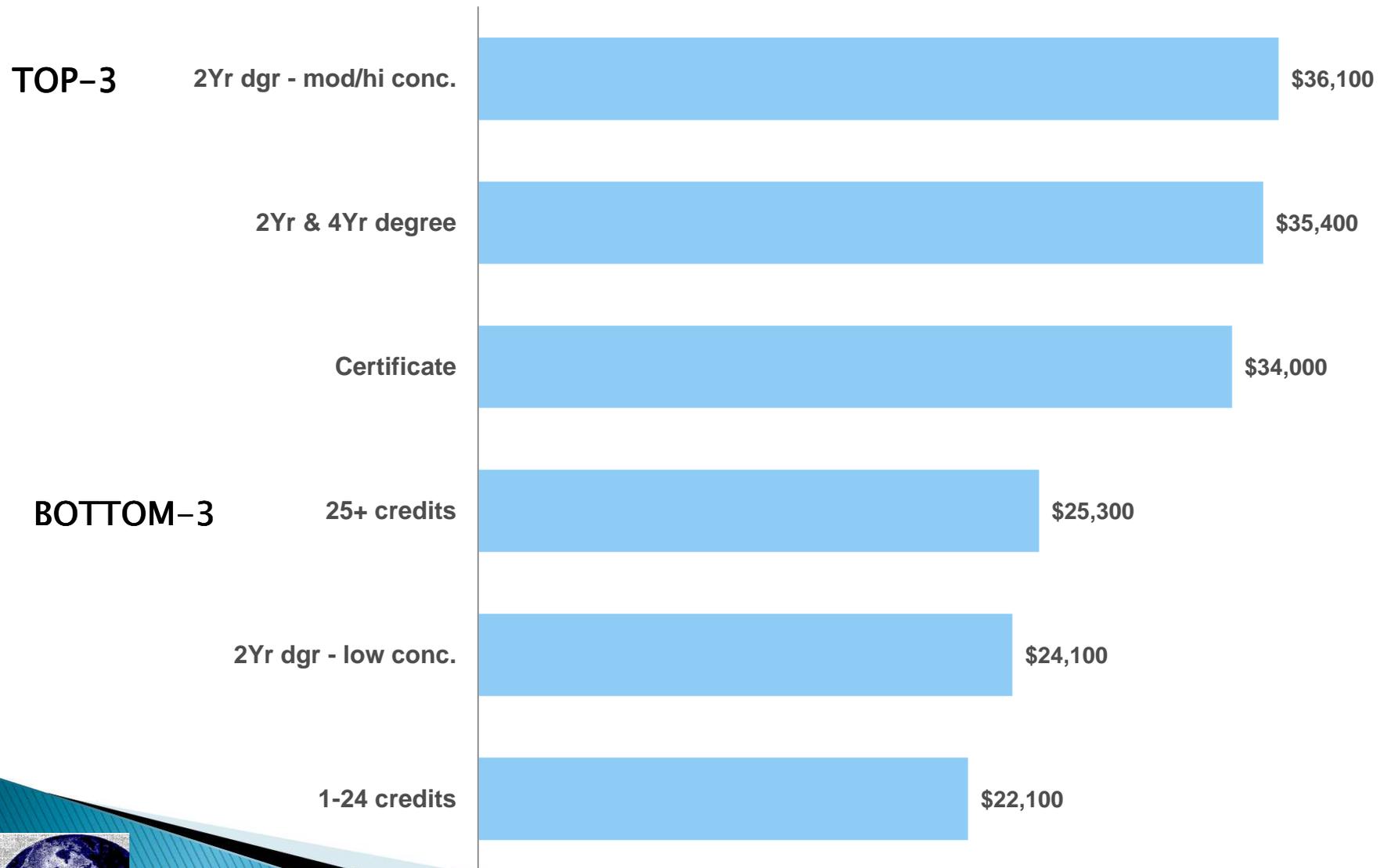
Return Category by Field-of-Study at Community Colleges for two-year degrees and one or two year certificates

- ▶ **High Return**
 - Healthcare*
- ▶ **Moderate Return**
 - Business*
 - Protective Services
 - Trade & Industry
- ▶ **Low Return**
 - Arts and Sciences
 - Personal and Social Services
 - Computer Science and Engineering*
 - Education*
 - Remedial

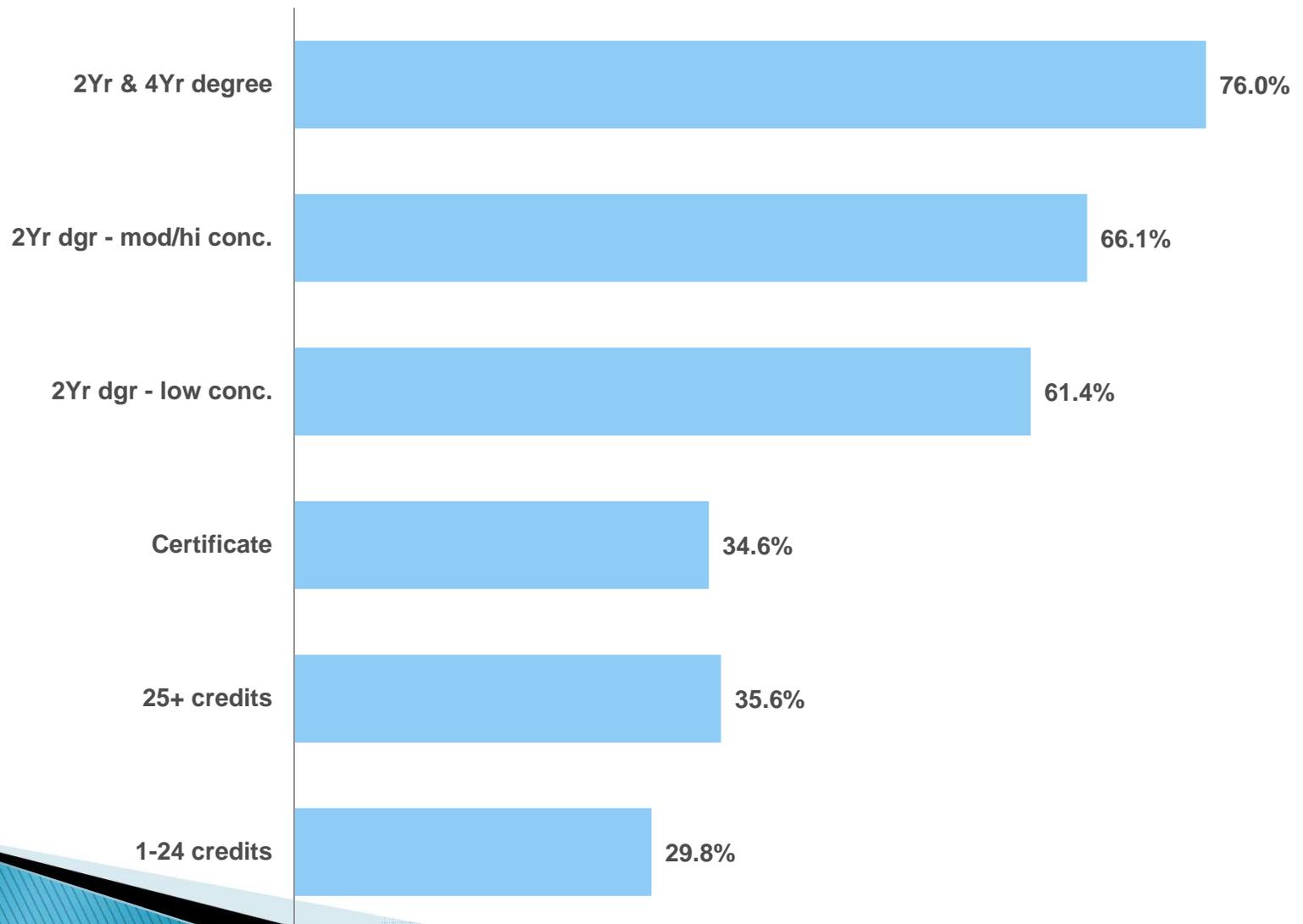
* Indicates high-return at four-year colleges



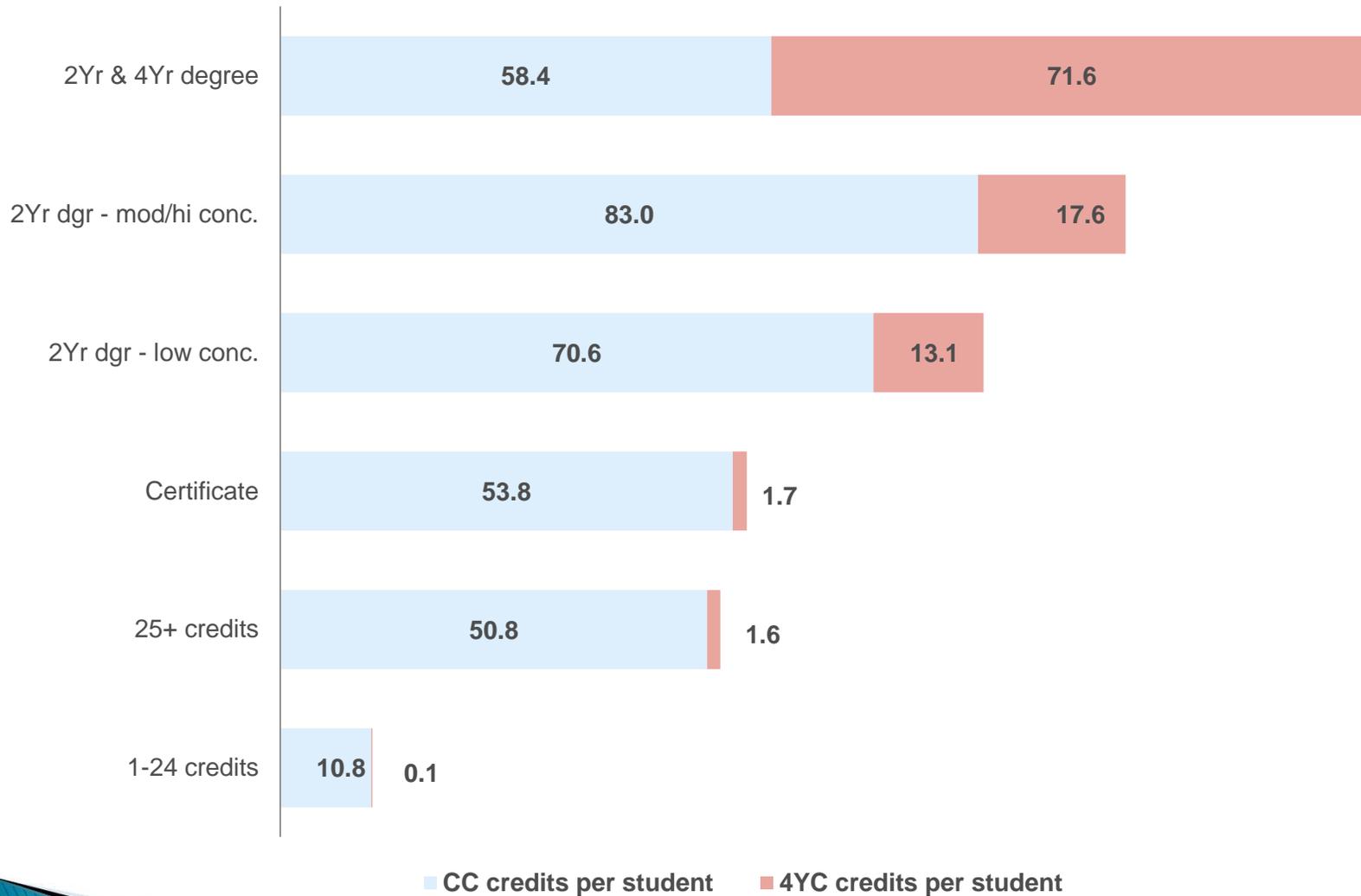
Earnings by Attainment and by Field-of-Study being High or Low Return at the 2-Year Degree Level



Percentage of Students with A or B HS-GPAs (as a measure of academic challenge)



Number of credits at community and four-year colleges



KEY POLICY-RELEVANT FINDINGS

- ▶ Students with certificates earn \$8,700 more per year than those with 25+ credits and no credential.
- ▶ Among students with 2-year degrees who do not go on to obtain 4-year degrees, those with hi/mod return concentrations earn \$11,300 more per year than students with low-return concentrations.
- ▶ Students in two of the Bottom-3 outcome groups could substantially increase their earnings by changing the mix of credits completed without completing:
 - More courses.
 - More academically demanding courses.



A third way to Strengthen Community Colleges' Influence on Economic Mobility

- ▶ Increase completion of higher return courses by:
 - ✓ Influencing demand—improving access to high-quality assessment, career counseling, and supportive services.
 - ✓ Influencing supply—providing incentives and funding to increase high-return slots.
- ▶ Influencing demand is attractive because students want to enhance career outcomes but lack accurate information about:
 - ✓ What programs are available.
 - ✓ How their choice of program affects earnings.
 - ✓ The likelihood of completing a program given their own backgrounds.
 - ✓ How to get timely help to resolve academic and personal problems.



Providing accurate information

- ▶ Depends on having accurate information about program outcomes by: field-of-study, training provider, student characteristics.
- ▶ This information could be developed using the type of data used for this presentation.
- ▶ These data could help One-Stop Career Centers funded by the US Department of Labor fulfill their mandate to:
 - ✓ Identify local high-demand high-pay occupations.
 - ✓ Measure the returns to all types of training.
 - ✓ Maintain a list of approved training-providers by field.
 - ✓ Act as an honest-broker.



Impediments to Increasing Supply of High-Return Courses

- ▶ Funding is inadequate to expand high-return programs.
- ▶ Taxpayer subsidies create perverse incentives by:
 - ✓ Not taking into account high-return courses being much more expensive than low-return courses.
 - ✓ Favoring academic over career courses.
 - ✓ Not rewarding colleges for superior performance.
- ▶ Key perverse incentive is to enroll students in low-cost low-return courses to cross-subsidize high-cost high-return courses.
- ▶ Students often are required to take remedial and other low-return courses.

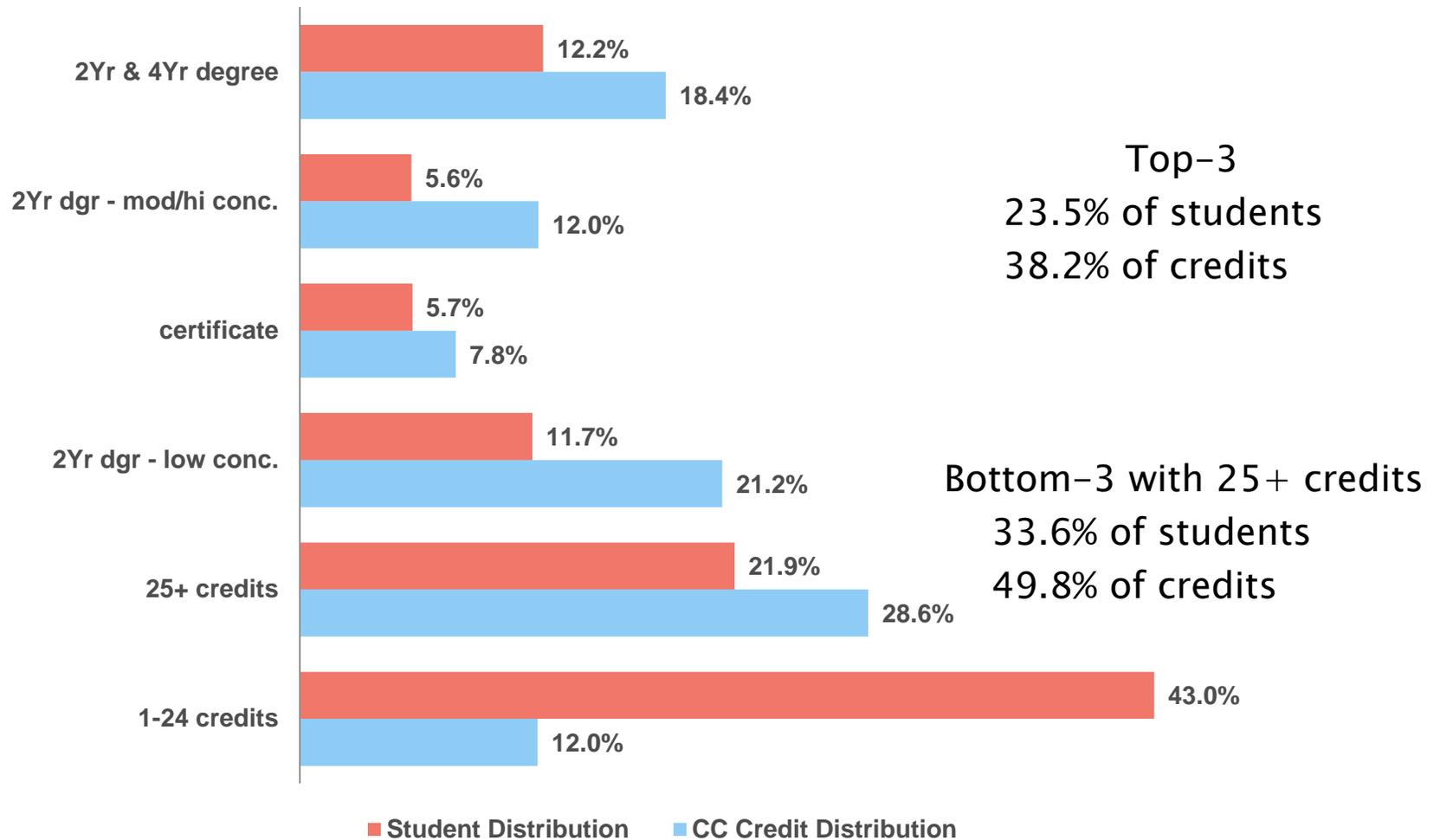


Ways to Overcome Impediments

- ▶ **Provide more aid to community colleges but tie aid to:**
 - ✓ Covering the full cost of each course.
 - ✓ Giving equal treatment to academic and career courses with similar returns.
 - ✓ Giving bonuses to colleges that provide superior outcomes taking into account students background.
- ▶ **Reduce requirements to develop nonessential skills based on:**
 - ✓ Having to pass tests or enter remediation
 - ✓ Having to pass distributional courses.
- ▶ **Notable examples:**
 - ✓ Expansion of technical colleges
 - ✓ Expansion of for-profit career colleges
- ▶ **Outcome:** Large increase in number of students completing high-return programs



The size of investments relative to their returns



- ▶ The investments and the returns are high for the Top-3 groups.
- ▶ The investments are high but the returns low for 2 of the Bottom-3 groups.
- ▶ The investments are low and the returns low for the 1-24 credit group.



Conclusion about increasing ROI

- ▶ The two key groups to focus on are students with:
 - 2-year degrees with low return concentrations.
 - 25+ credits with no credentials.
- ▶ This reinforces the view that the “low-hanging fruit” is having:
 - More two-year degree students concentrating in high and moderate return concentrations.
 - More 25+ credit students with no credentials obtaining certificates.



Supplemental Slides



Ways to Boost Earnings

- ▶ Avoid being in a low-income family.
(Not an action item unless reincarnation is possible.)

Follow the advice your mother gave you:

- ▶ Perform well in high school.
- ▶ Progress as far as possible in college.
- ▶ Select high-return college courses.



Conclusions about academic challenge

(based on differences in HS-GPA)

- ▶ Most, but not all, students with 2-year degrees with low-return concentrations could:
 - Have gotten 2-year degrees with higher return concentrations because the HS GPAs of students in the two terminal 2-year degree groups are about the same.
 - But obtaining 4-years would be more difficult since the HS-GPAs of students with 2 & 4 year degrees are higher than for the low-return 2-year degree students.
- ▶ Most students with no credentials could have obtained certificates because the Bottom-3 groups have about the same HS GPAs.

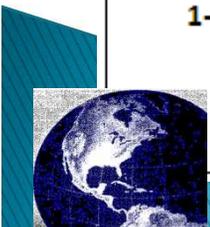
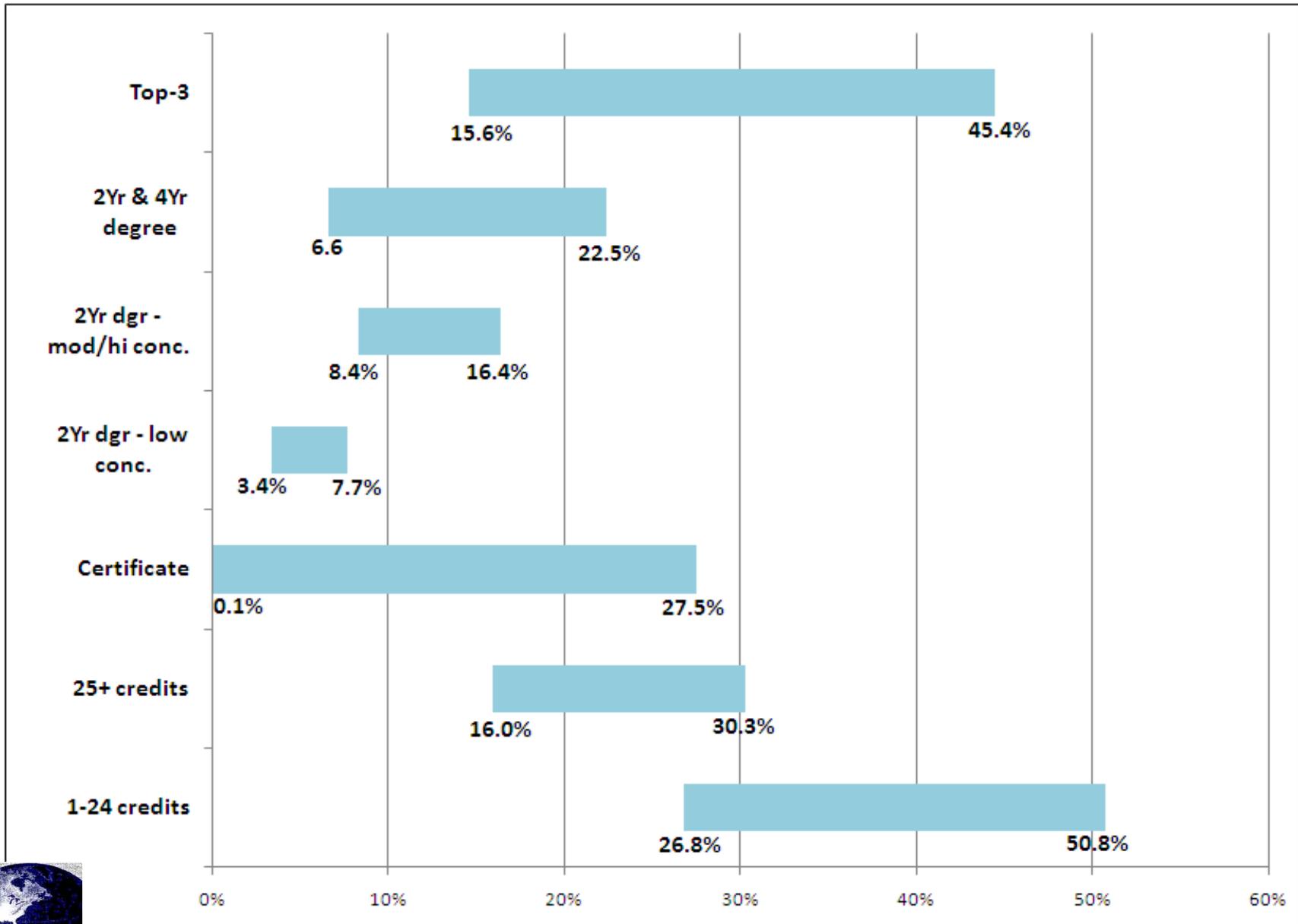


Conclusions about taking more courses (based on differences in credits earned)

- ▶ Most students with 25+ credits could have obtained certificates since credits earned by these two groups are about the same.
- ▶ Most, but not all students with low return 2-year degrees could have obtained a 2-year degree with a higher returns since the difference in credits is modest.
- ▶ Students with low-return 2-year degrees would have a difficult time completing a 4-year degree because students with 4-year degrees completed many more credits and completed most credits at 4-year colleges.
- ▶ Students with 1-24 credits would have difficulty obtaining certificates because they would have to complete many more courses.

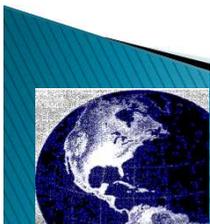
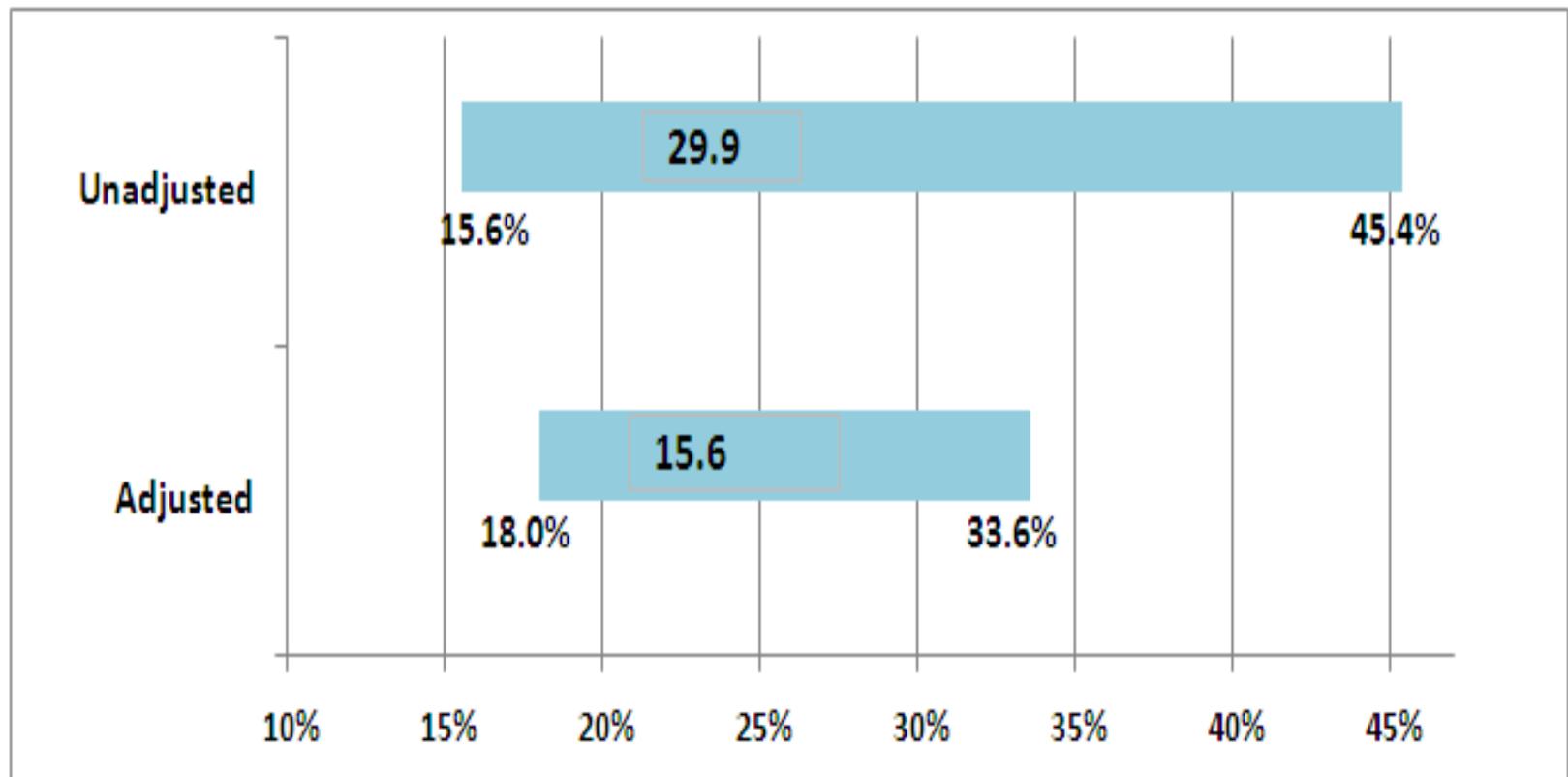


Cross-College Variation in Outcomes



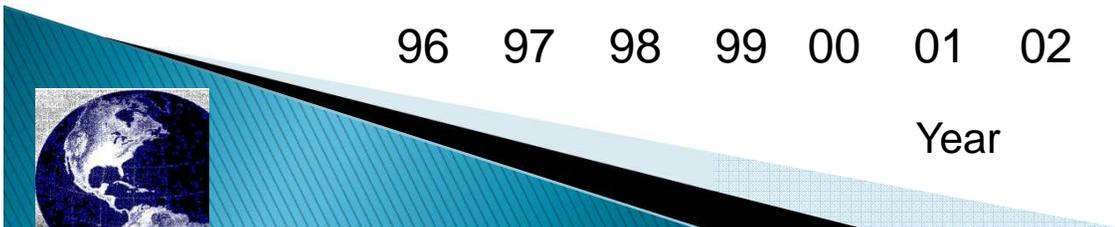
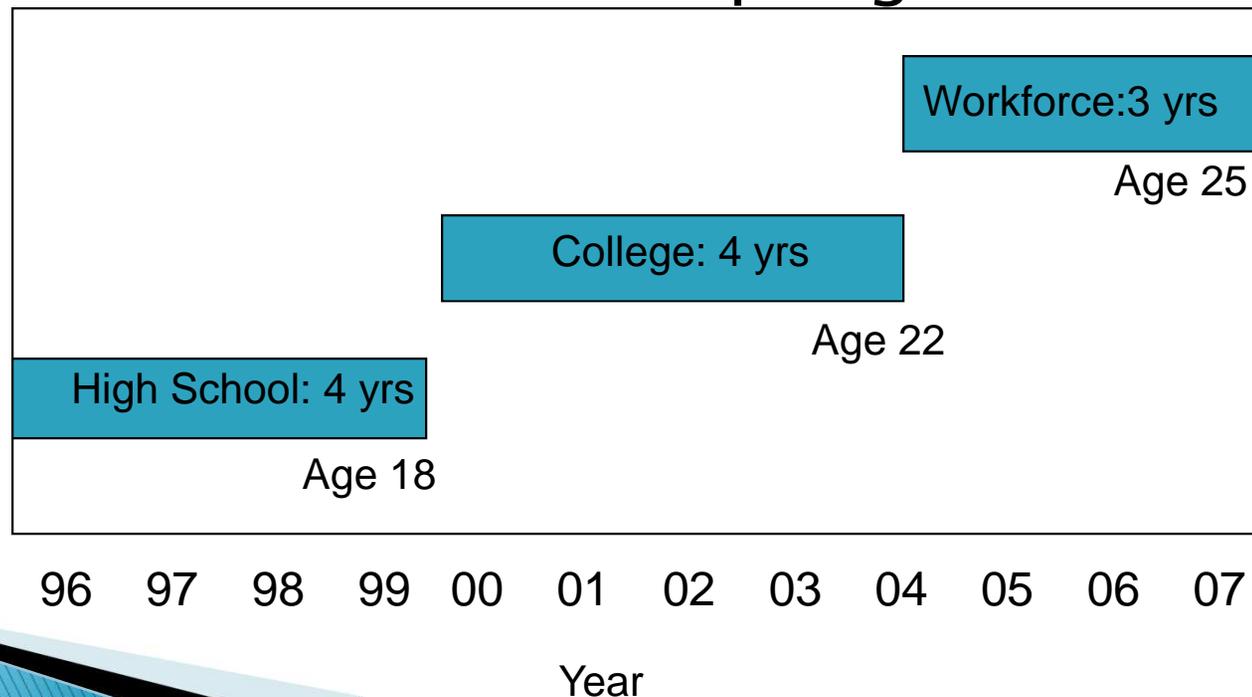
Why is there so much variation across CCs?

- ▶ About 67 percent of the variation is due to differences in the:
 - HS-GPAs of the students.
 - Percentage of students coming from rural high schools.



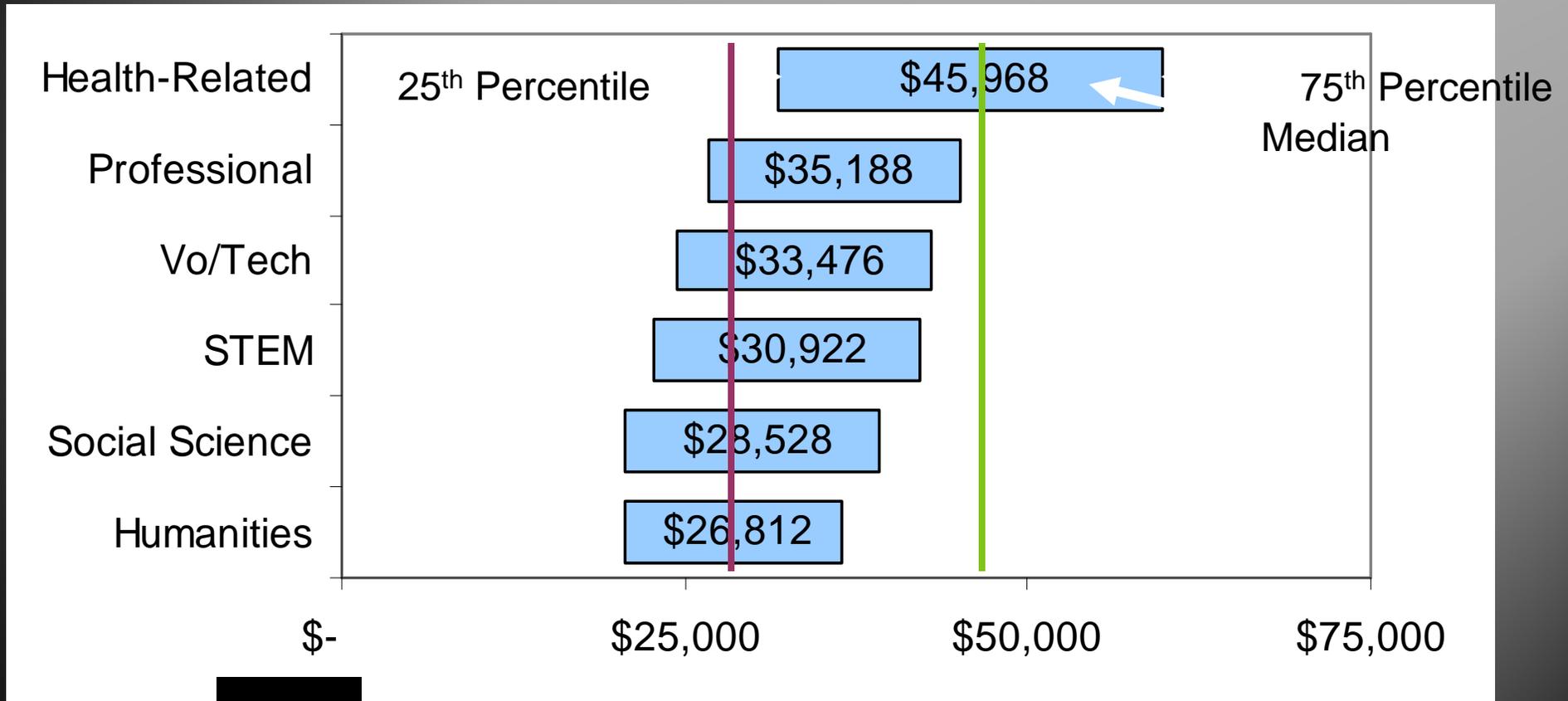
Timeline for a typical BA student

- ▶ Transition to high school—starting 9th grade in AY96 (fall 1996)
- ▶ Transition to college—fall 2000
- ▶ Transition to workforce—spring 2004



Certificate and AA field of study strongly affects earnings

Post-College Earnings Certificates & AAs



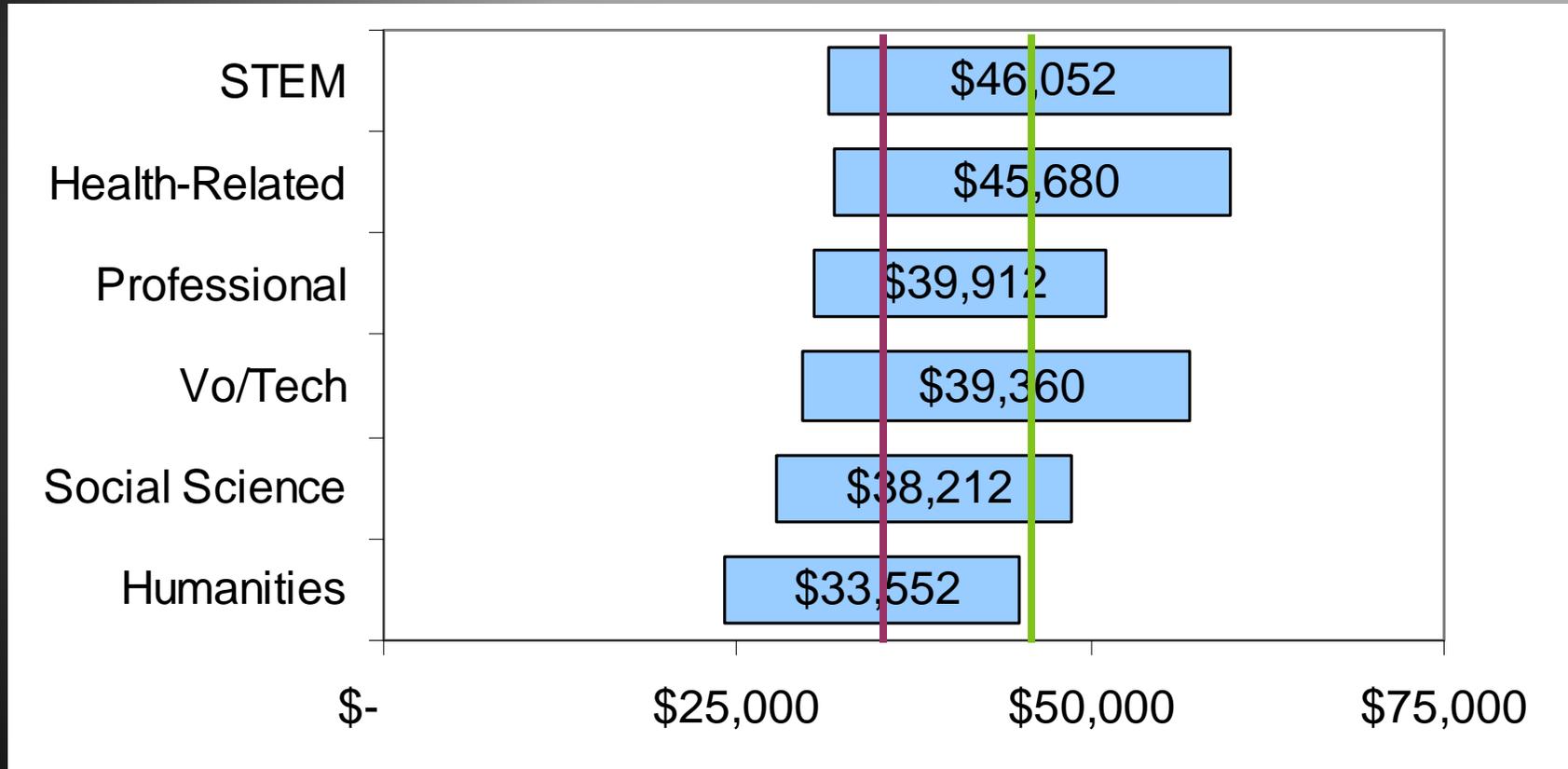
Median
Humanities
Earnings

Median
Health
Earnings



BA field of study modestly affects earnings

Post-College Earnings for BAs



Median
Humanities
Earnings

Median
Health
Earnings

