Landscape of Higher Education: Human Capital

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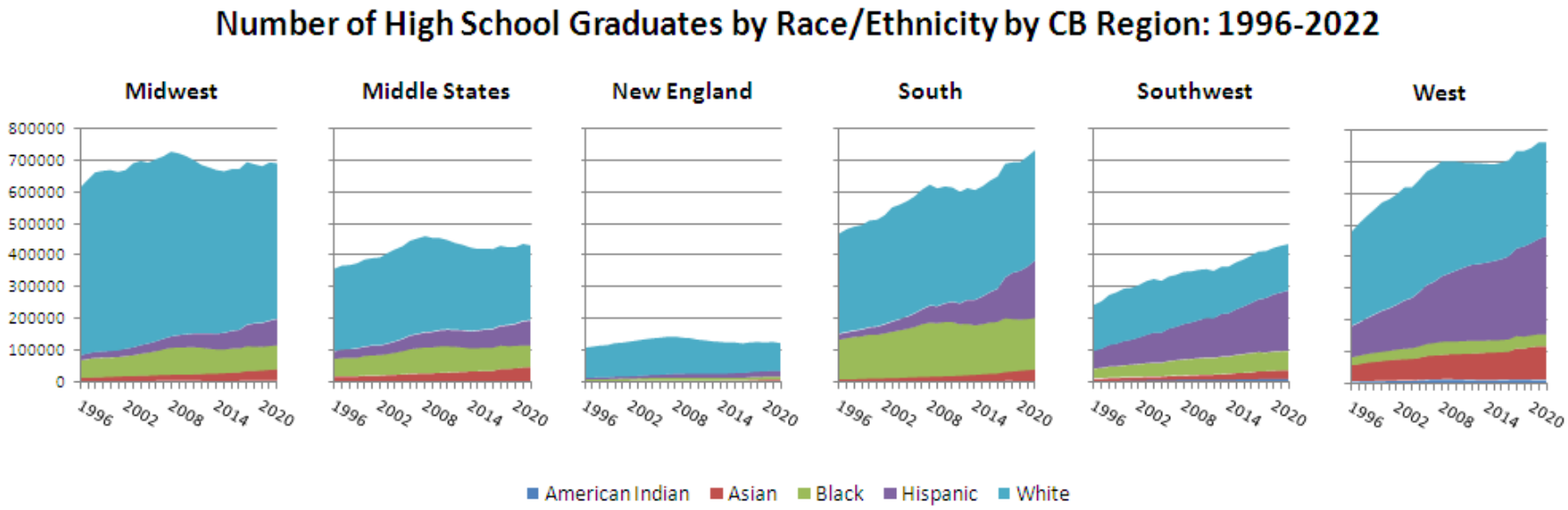
Senior Research Analyst, R&D

College Board National Forum

Miami, FL

October 26, 2012

The Demographic Wave

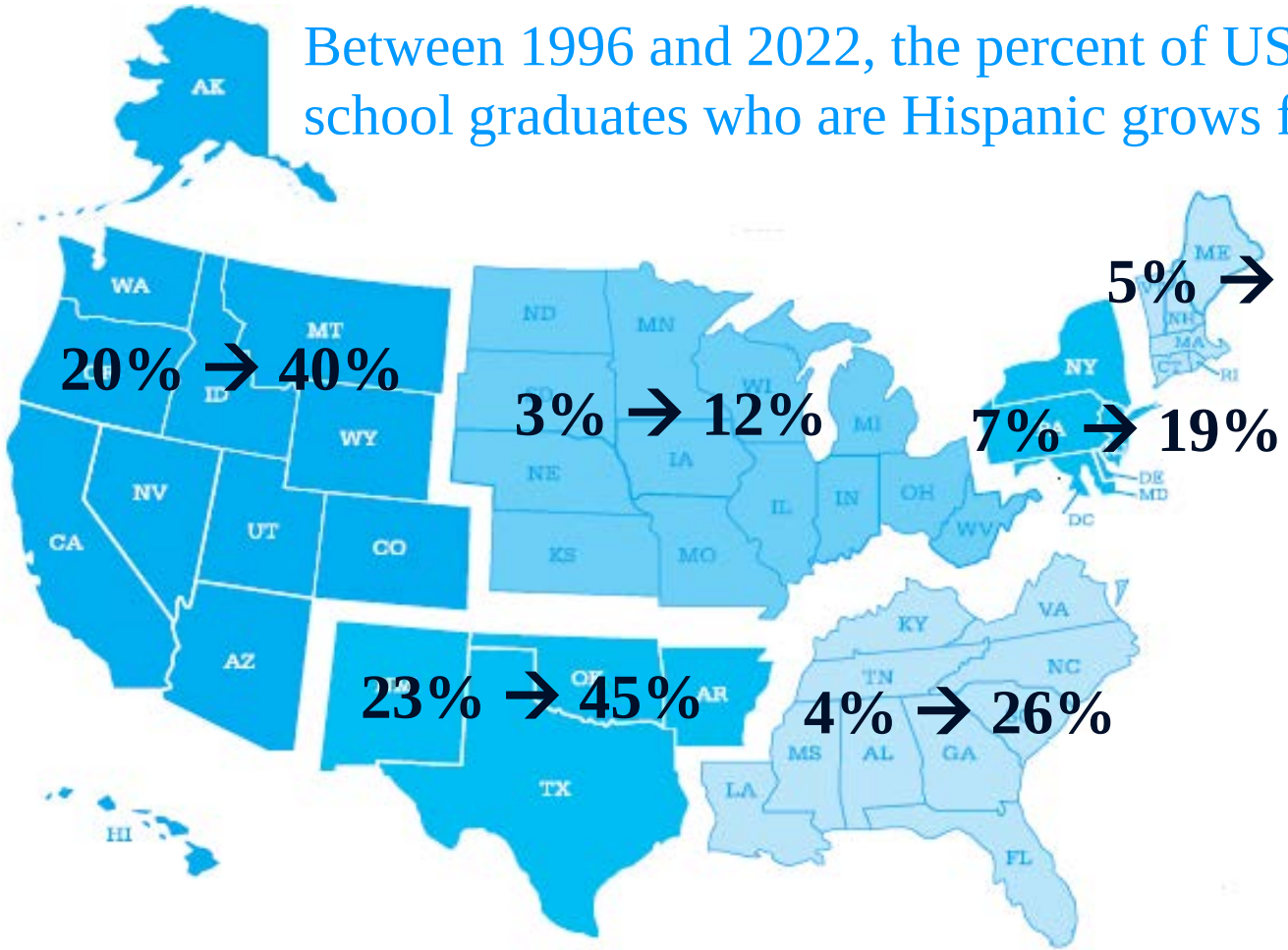


- Rapid expansion and diversification of graduates

- Source: Western Interstate Commission for Higher Education (WICHE), *Knocking at the College Door*, March 2008

The Demographic Wave

Between 1996 and 2022, the percent of US public high school graduates who are Hispanic grows from 10% to 28%.

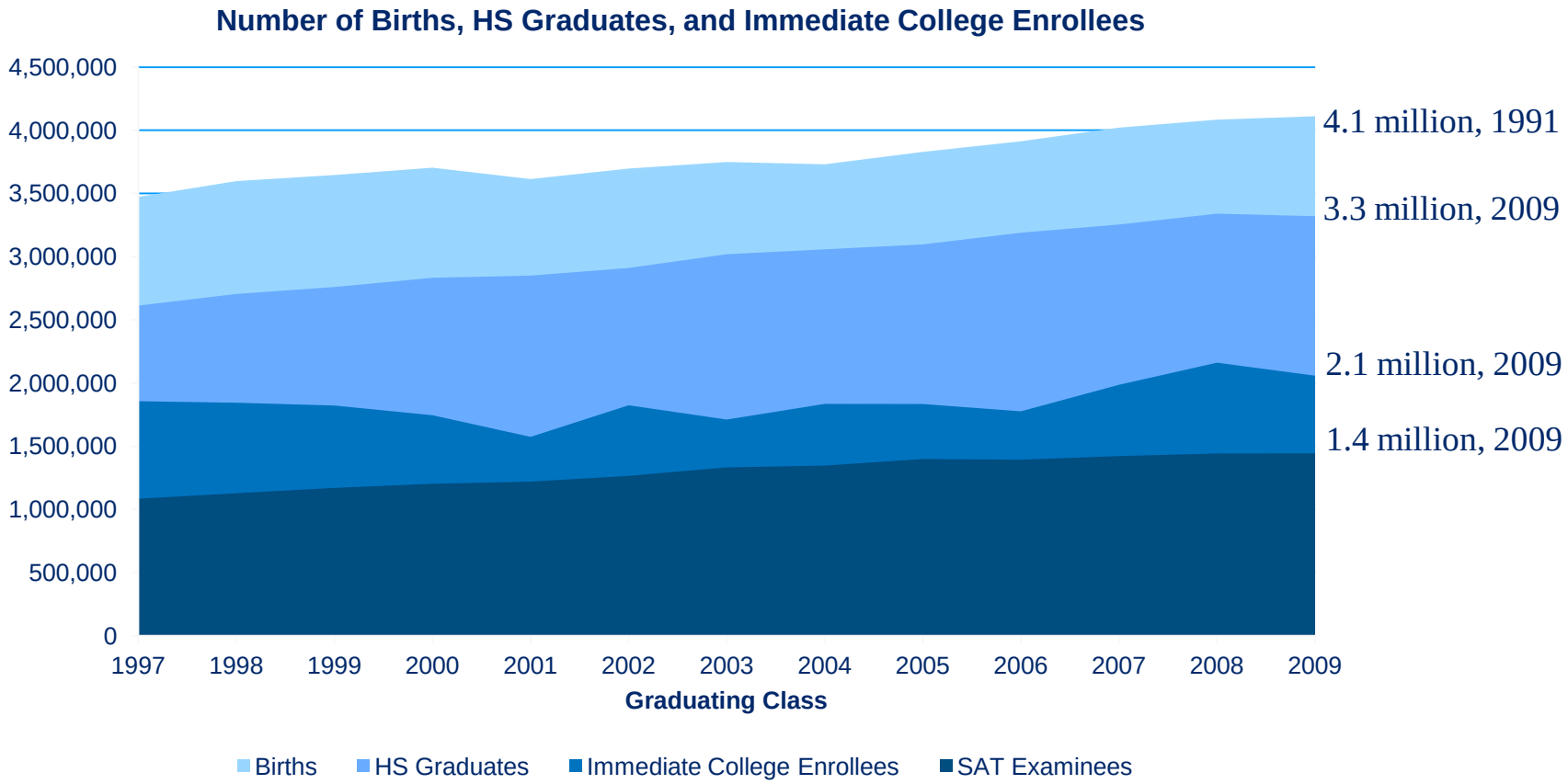


Regional and state variation in growth

Class of 2022 entered 3rd grade this fall

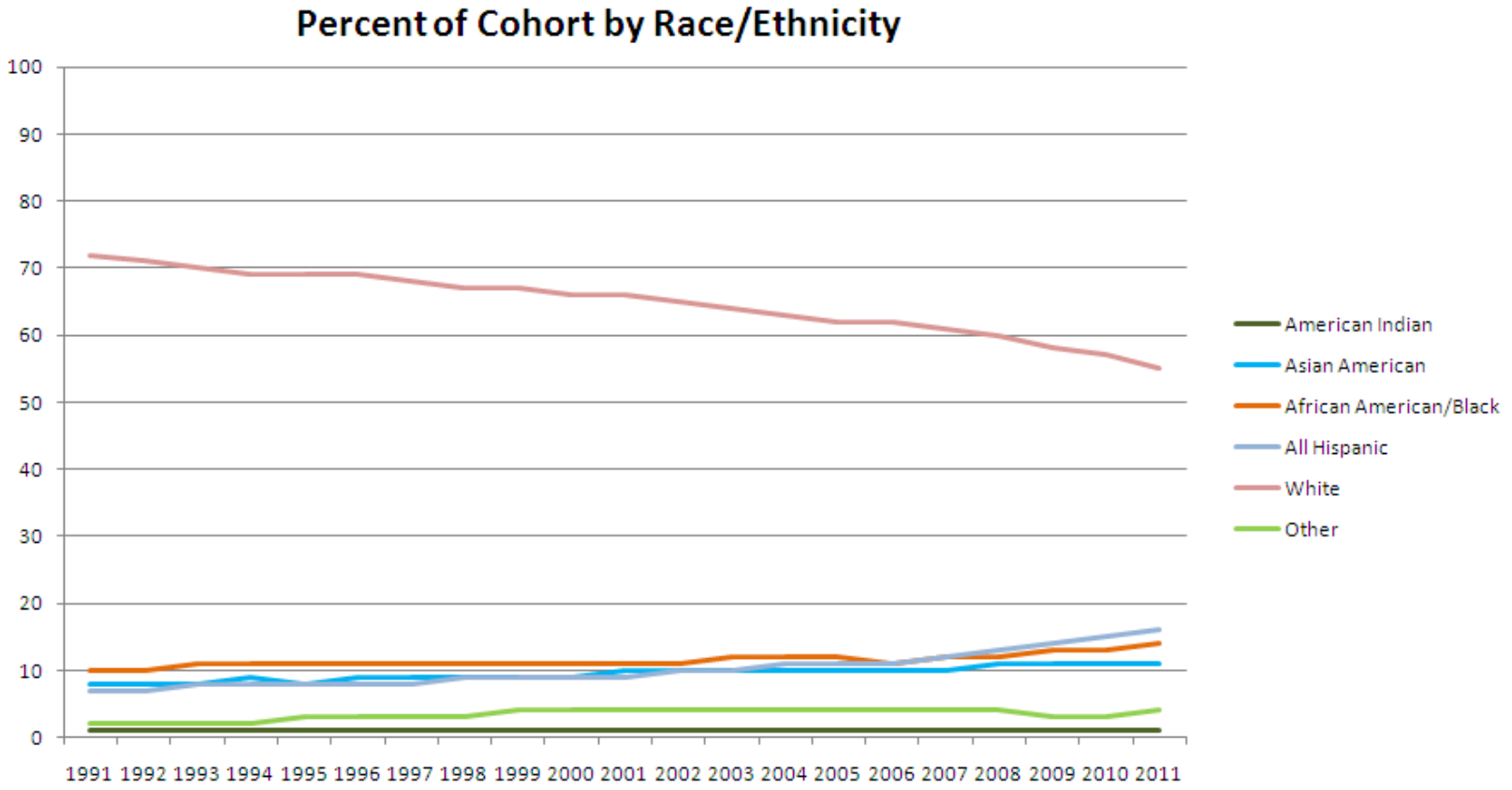
Source: Western Interstate Commission for Higher Education (WICHE), *Knocking at the College Door*, 2008

College-Bound Seniors



Sources: CDC National Center for Health Statistics Monthly Vital Statistics Reports (births); Western Interstate Commission for Higher Education (high school graduates); NCES Digest of Educational Statistics 2010 (immediate college enrollees); College Board (SAT Examinees in US Cohort)

Trends in CBS Student Characteristics



- Increasingly diverse SAT examinees

Source: *College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)*

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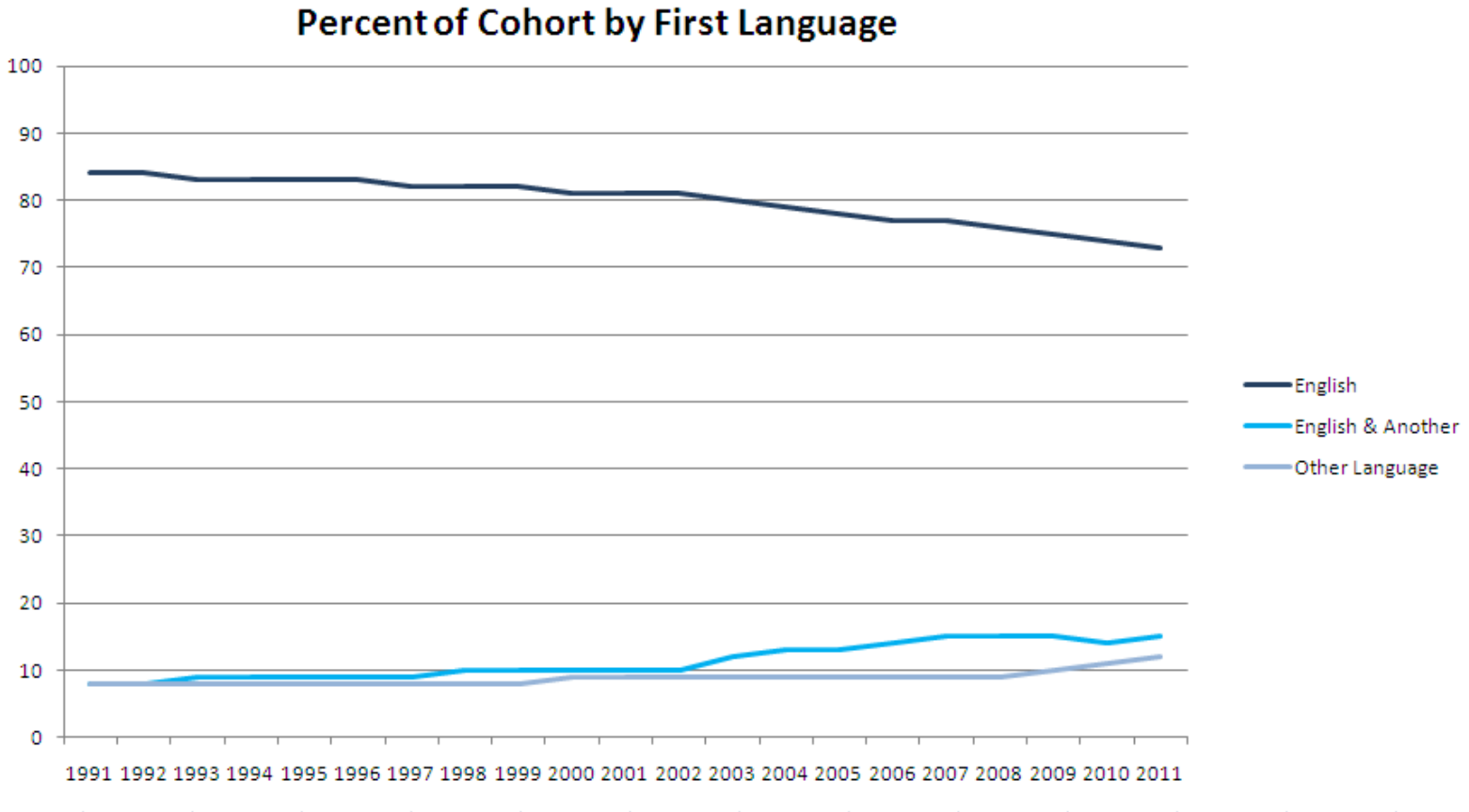

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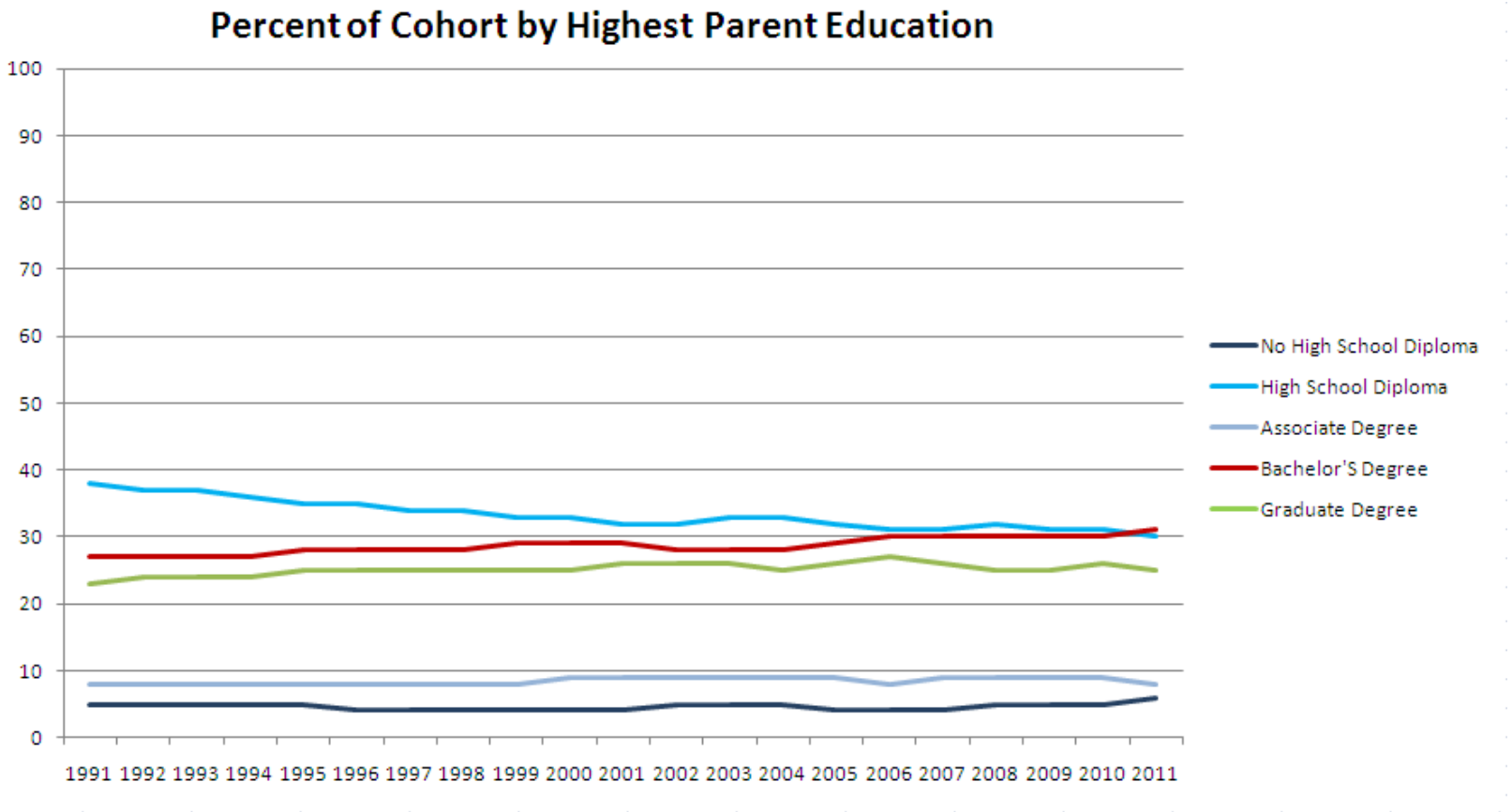
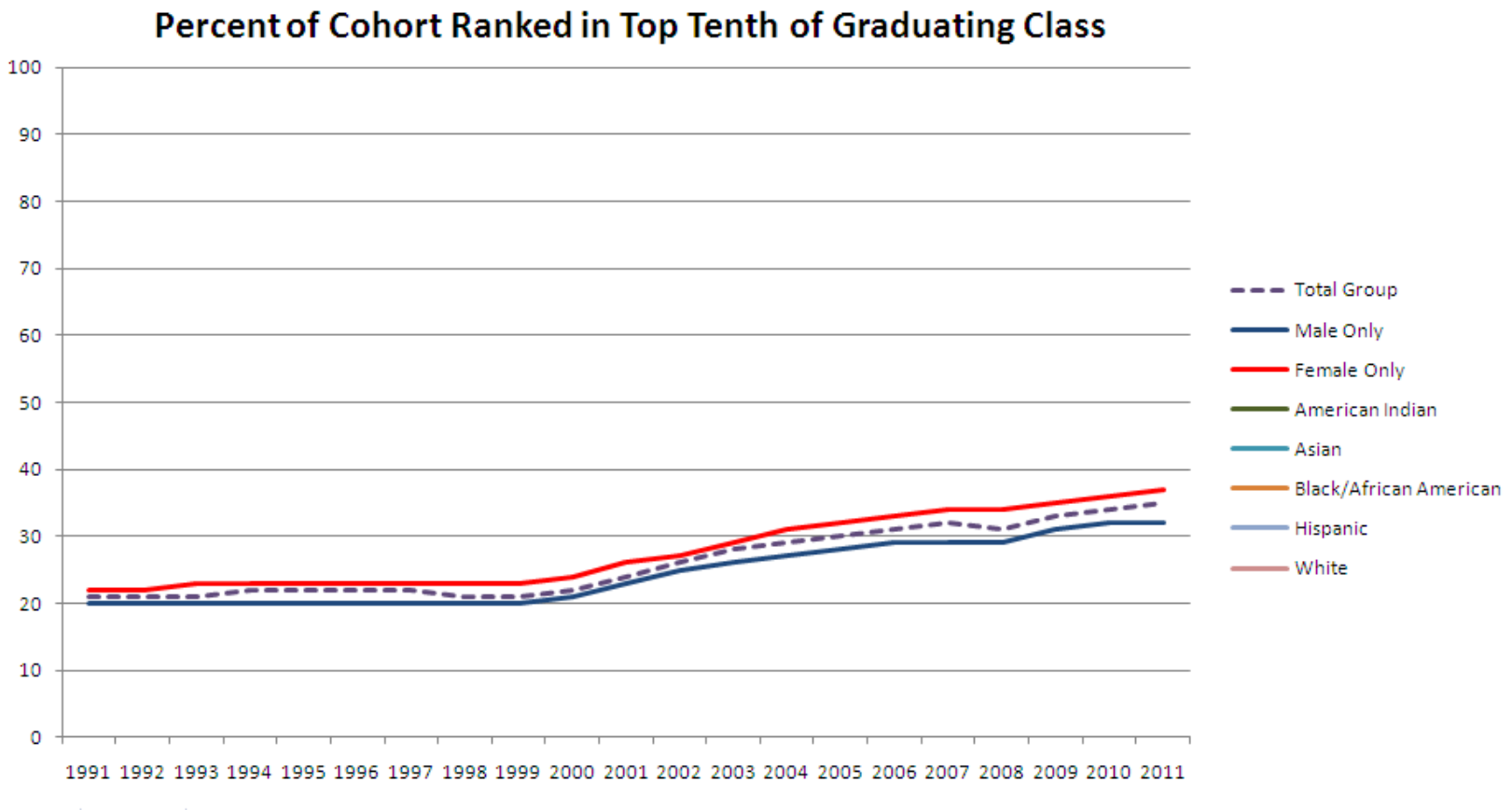


- Steady % First Generation in past 10 years

Source: *College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)*

Trends in Academic Preparation - Rank



- Steady rise across groups; persistent gaps

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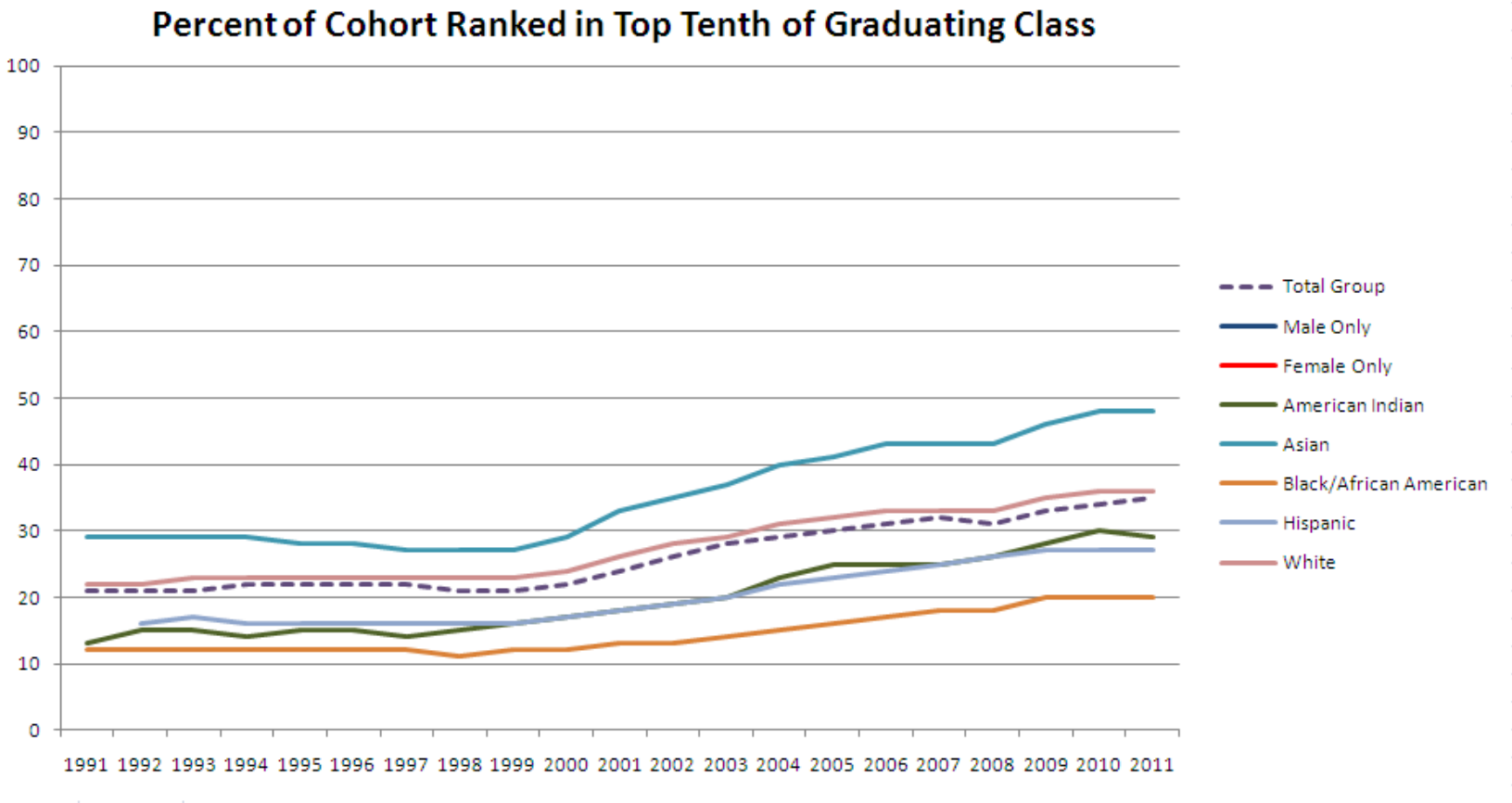

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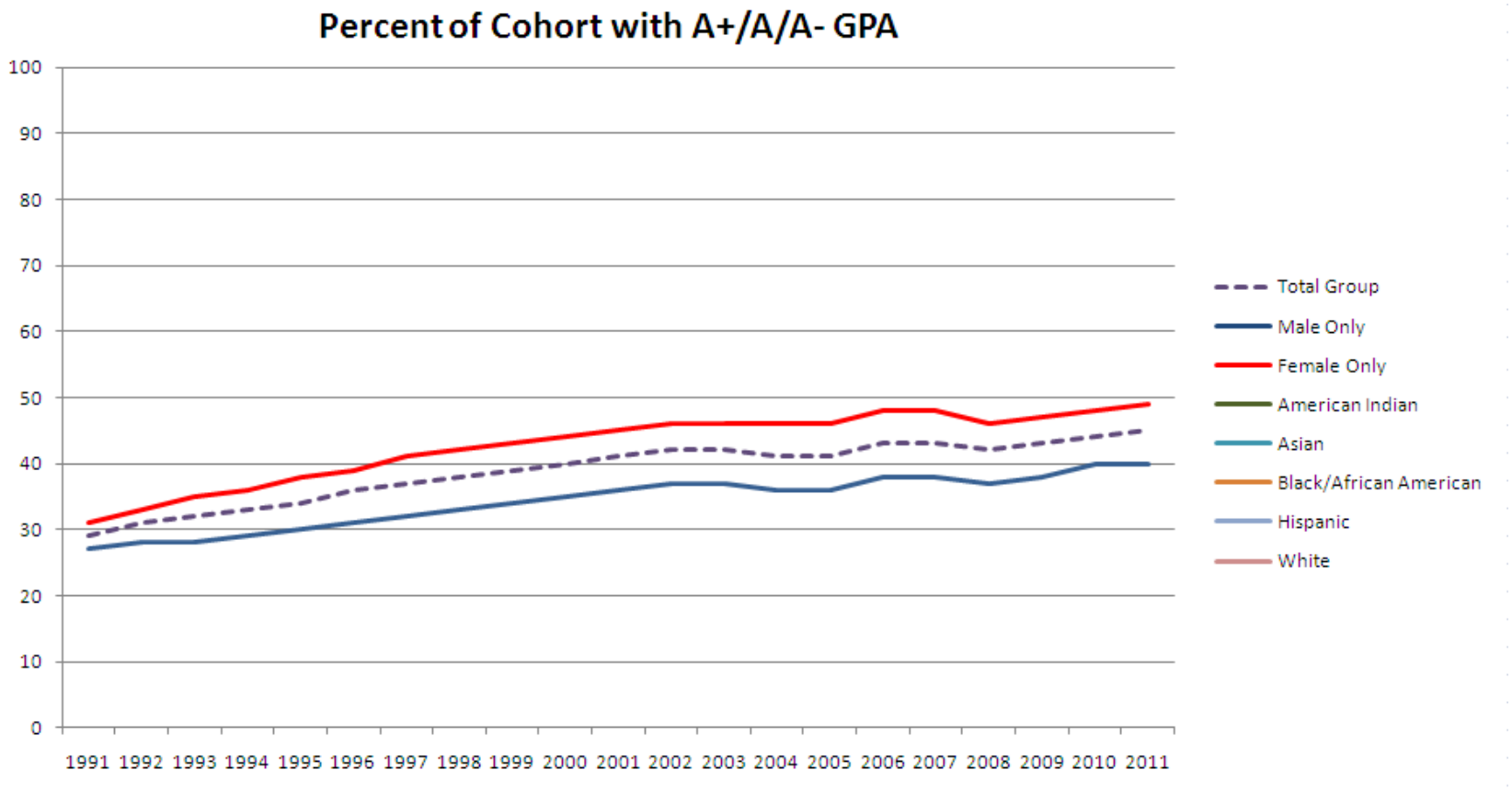
Trends in Academic Preparation - GPA



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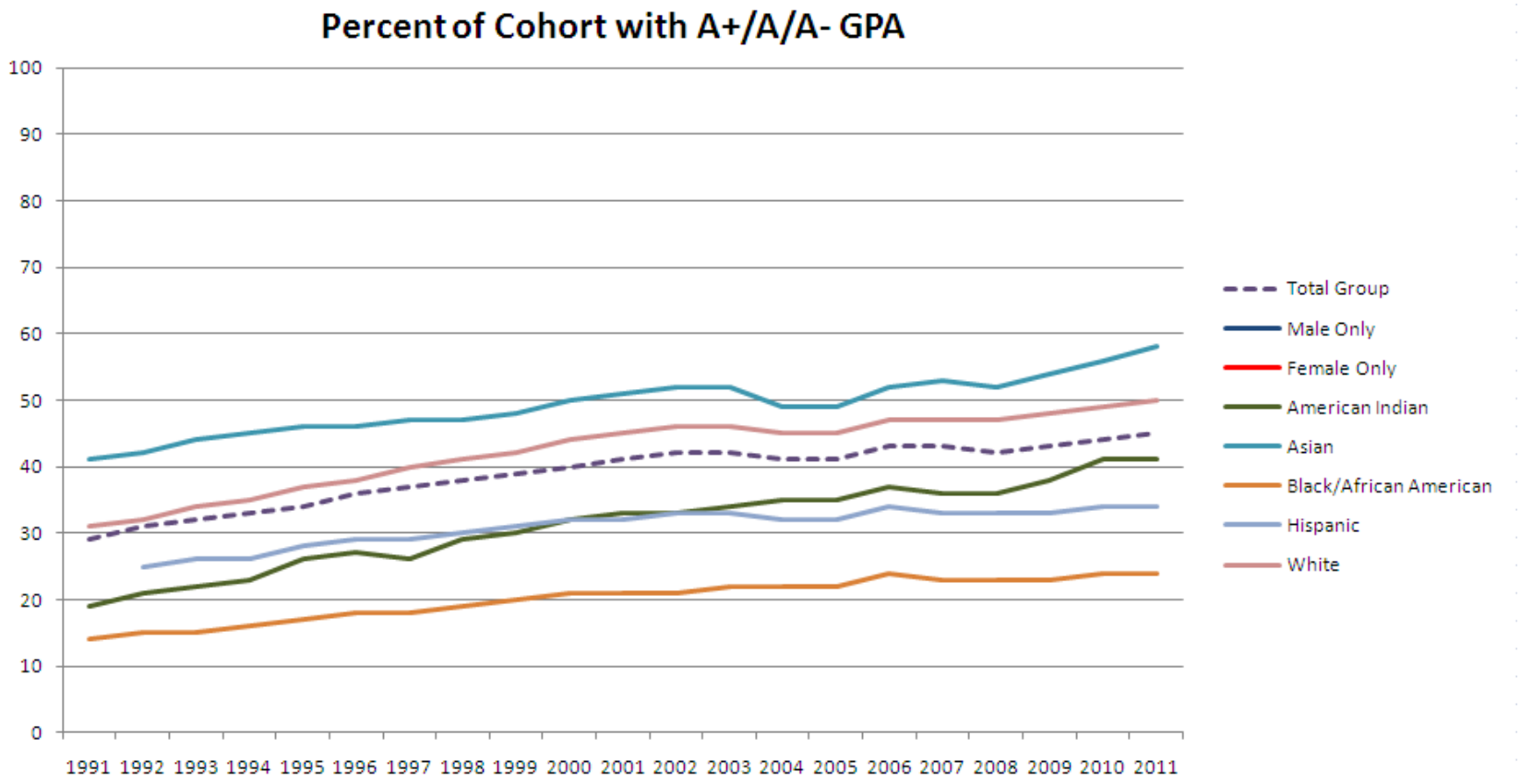

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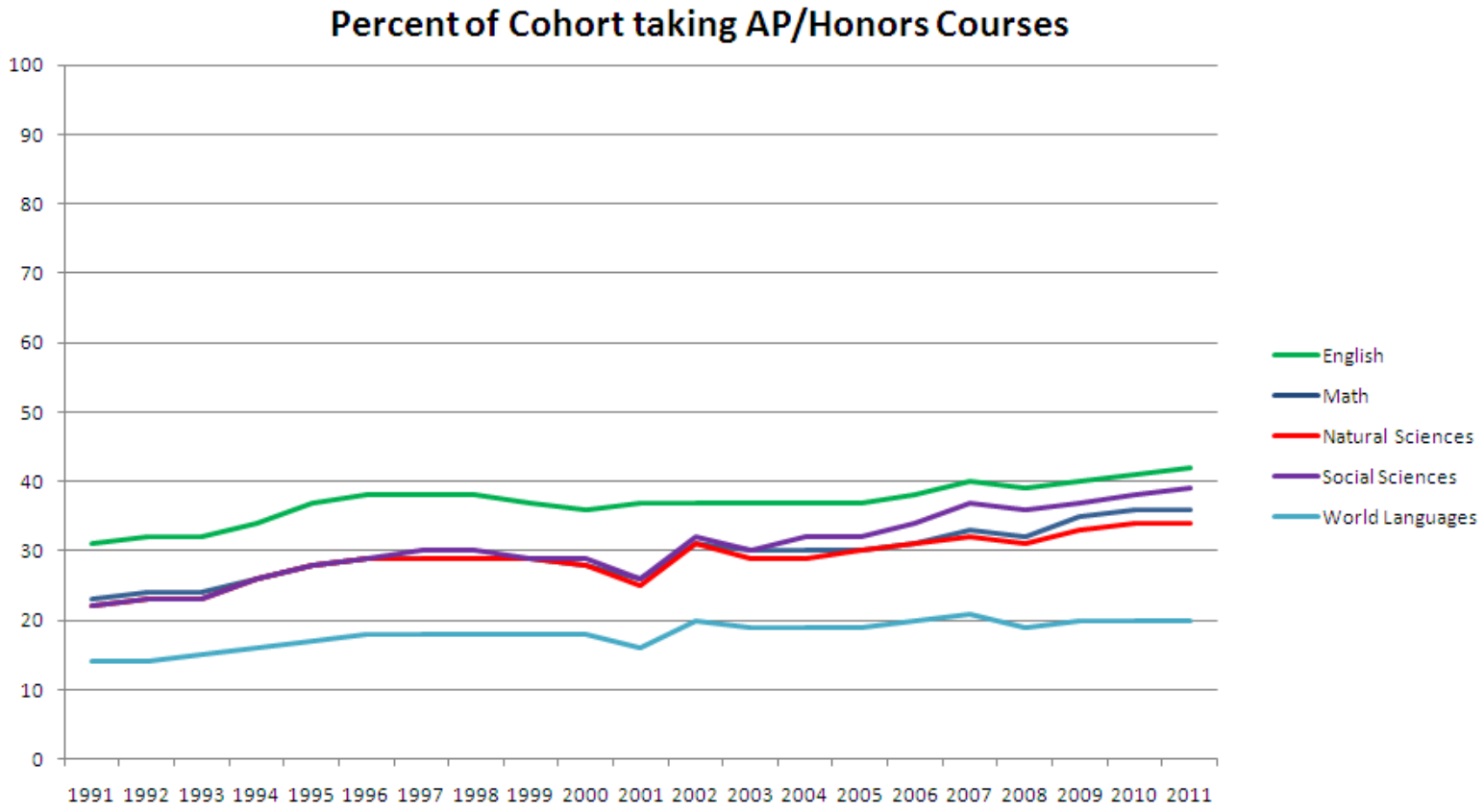
Trends in Academic Preparation – AP/Honors



- Steady rise across disciplines

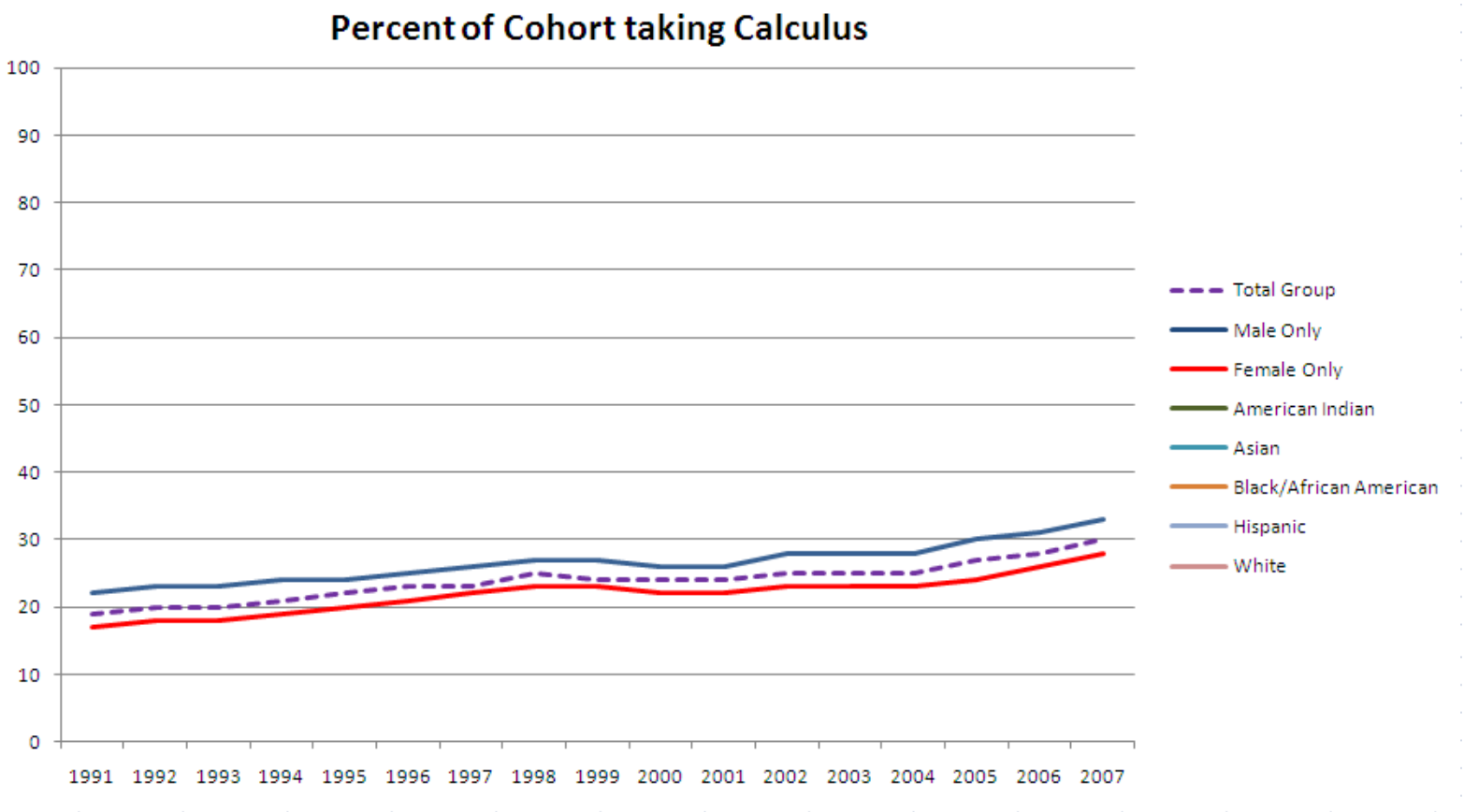
Source: *College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)*

CollegeBoard inspiring minds

Trends in Academic Preparation – AP/Honors

- Similar, troubling gaps were observed across disciplines
- The difference by race/ethnicity were most notable in:
- Math
  - In the class of 2011, 48% of Asian examinees indicating taking AP/Honors Math compared to 24% of Black/African American and 30% of Hispanic examinees.
- Science
  - In the class of 2011, 44% of Asian examinees indicating taking AP/Honors science compared to 23% of Black/African American and 27% of Hispanic examinees.

Trends in Academic Preparation – Calculus



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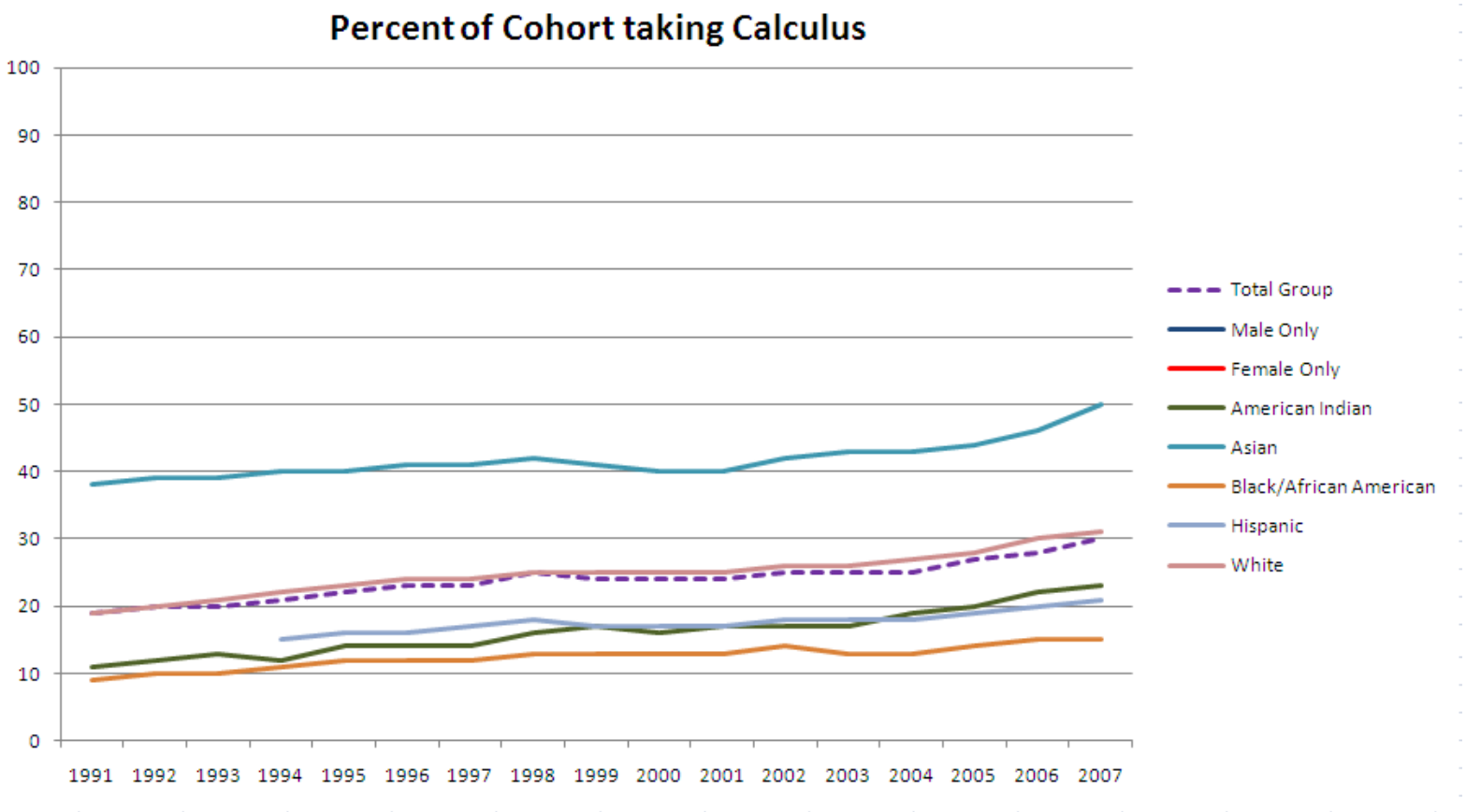

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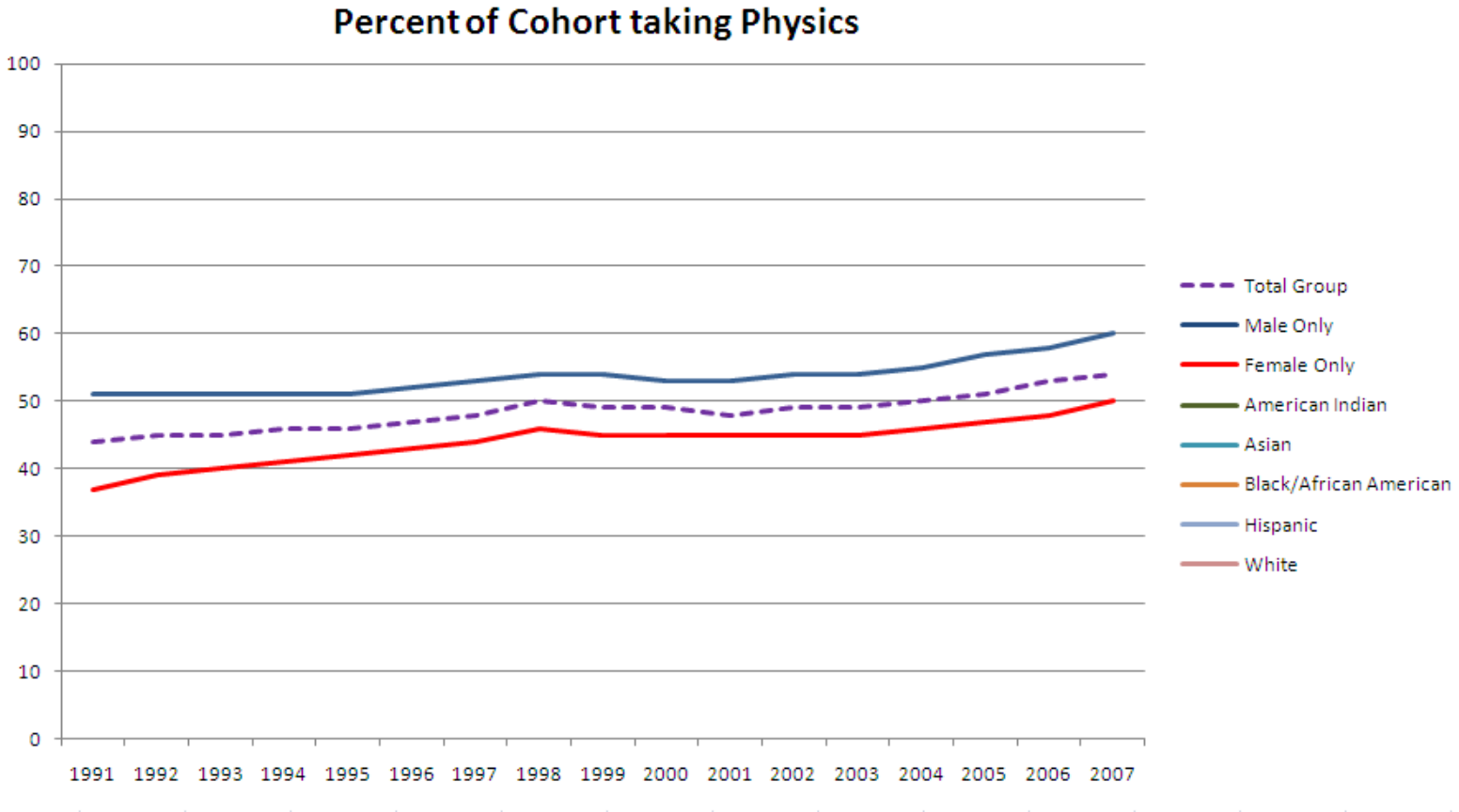
Trends in Academic Preparation – Physics



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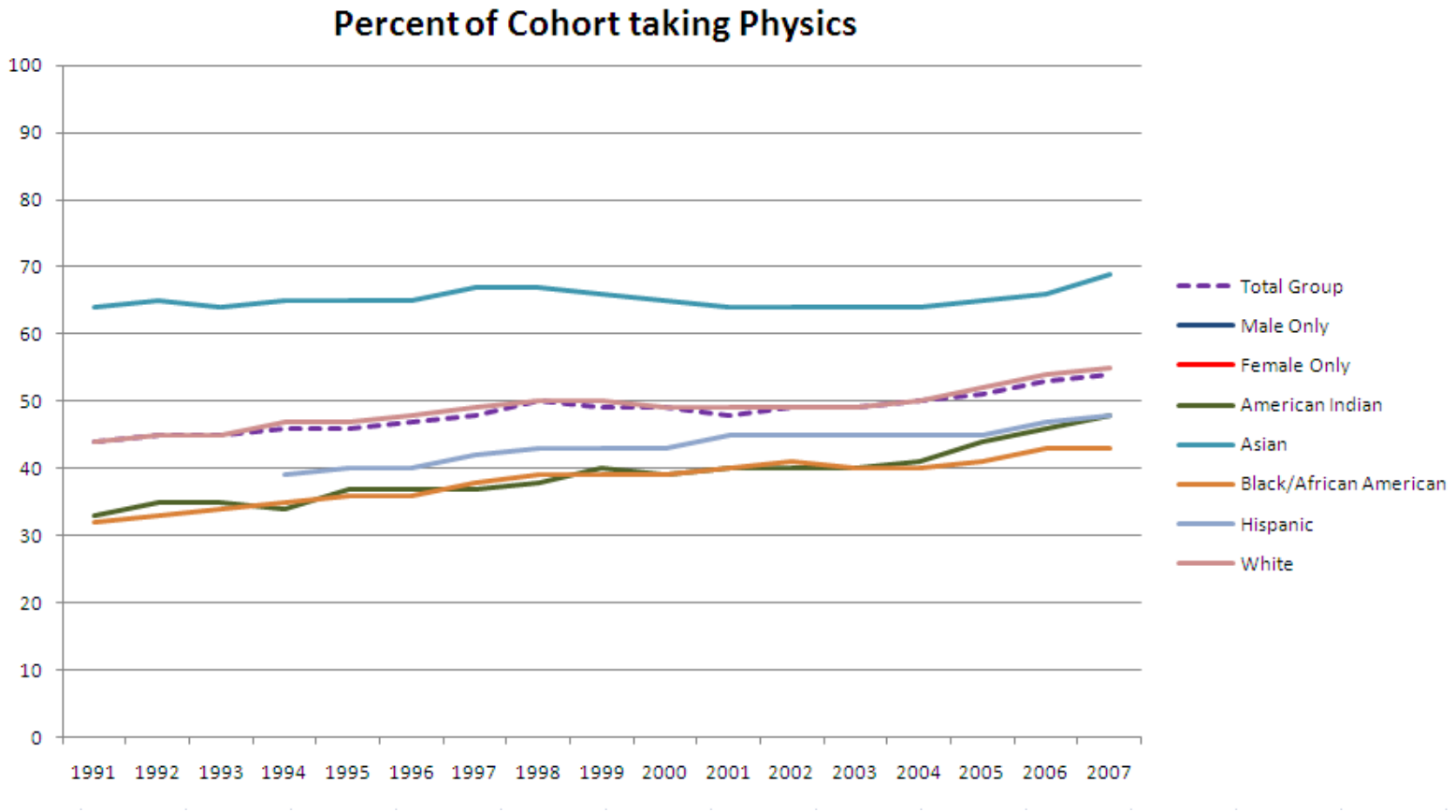

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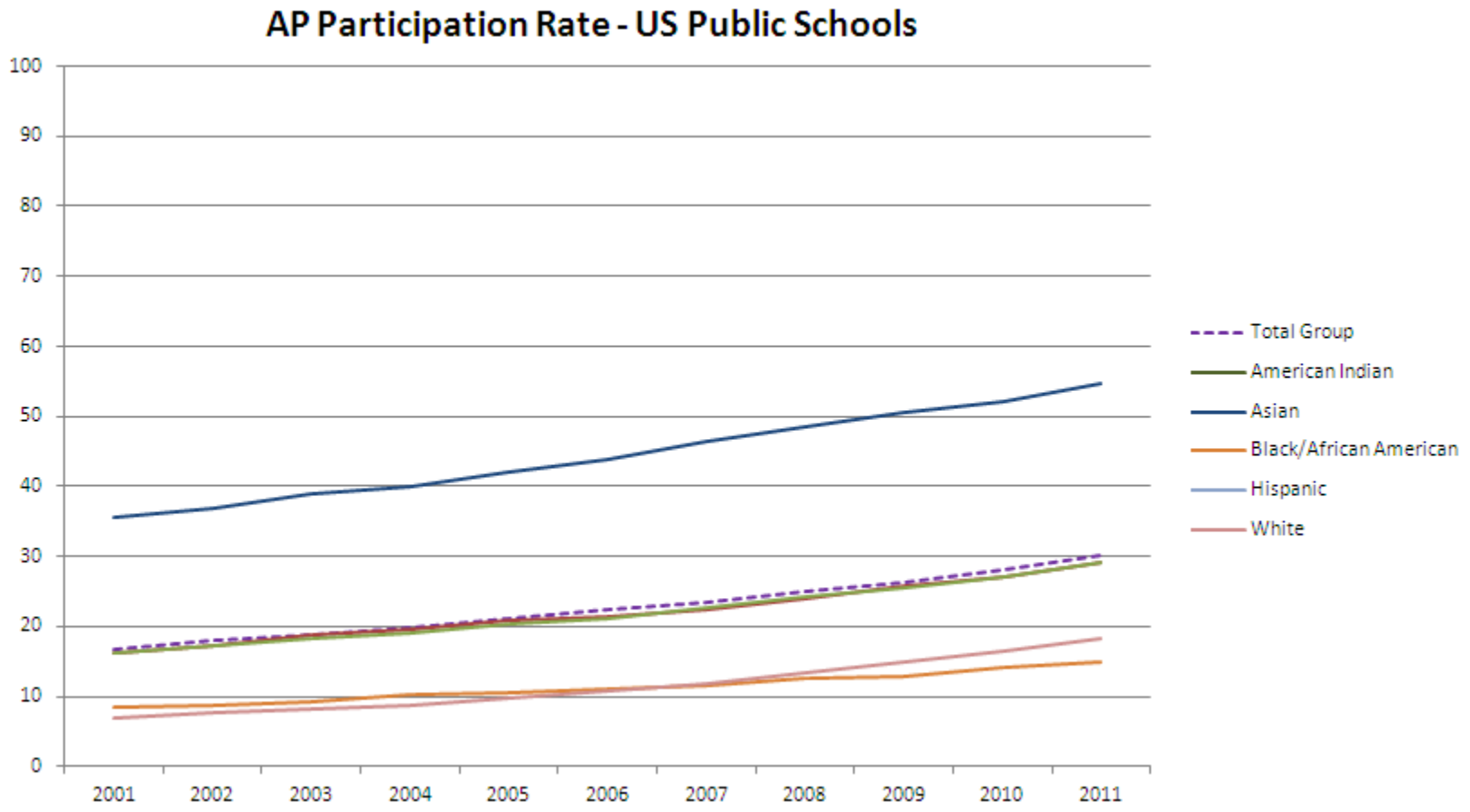
Access to Rigorous Courses



- Steady rise across groups; persistent gaps
- Hispanic and white rates are identical

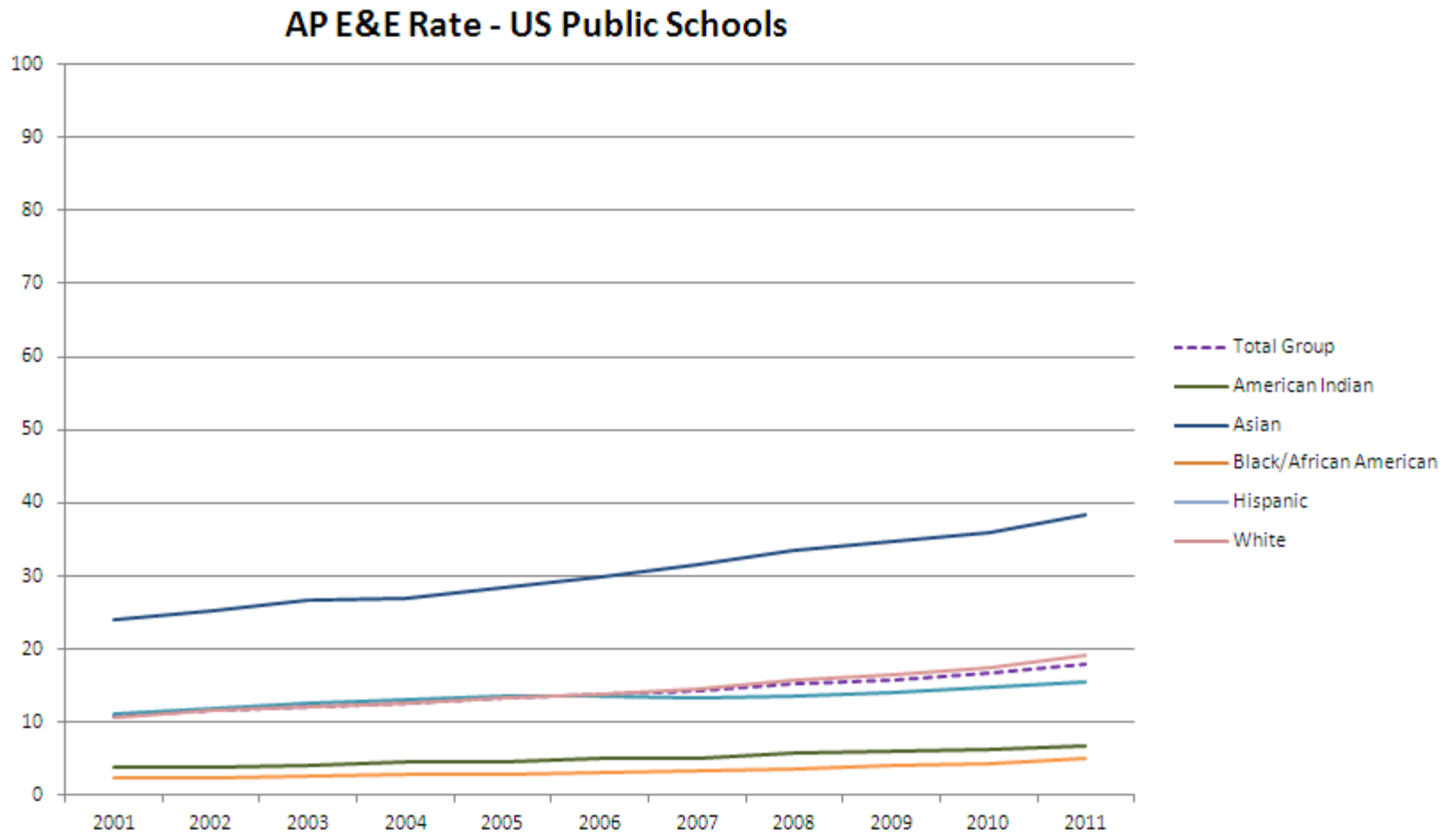
Performance in Rigorous Courses

- Equity & Excellence metric
  - Percent of ***graduates*** scoring 3 or higher on an AP exam during high school.
  - Found in APRN, OSR, etc.
  - **Not** equivalent to 'pass rate' which reflects the percent of ***examinees*** scoring 3 or higher.

Some thoughts on ‘Pass Rates’

- It’s not that we don’t want to talk about them or aren’t concerned about students who aren’t successful….
- The issue is about interpretation and potential behavior consequences.
  - On a state or national level, they reflects vastly different school/district policies as to who gets into AP, who takes the exam, and how well those students were prepared both prior to and during AP.
  - The easiest way to increase pass rates is to build barriers to entry, as opposed to doing the hard work of making sure that students and teachers have the tools to succeed.
    - It is more efficient/cheaper to decrease the denominator than it is to increase the numerator. Is that good for students?

Performance in Rigorous Courses



Who's knocking at the college door?

- An increasingly diverse and academically prepared student body
  - Also motivated and confident
- This presents substantial challenges and incredible opportunities

Questions?

- Researchers are encouraged to freely express their professional judgment. Therefore, points of view or opinions stated in College Board presentations do not necessarily represent official College Board position or policy.

- Please forward any questions, comments, and suggestions to:
  - Kelcey Edwards – kedwards@collegeboard.org

Landscape of Higher Education: Net Price

Greg Perfetto

Executive Director, College Connection & Success

October 26, 2012

Net Price Calculators -- Overview

- Early data from first year under mandate
- Broad Representation
  - 318 Colleges
  - Public, Private, Doctoral, Baccalaureate
  - Over 1 Million NPC “hits” since going live.
  - Almost 600K completed calculations over the just completed 12 month cycle, yielding detailed information on net cost, as well as family contribution estimates based on both IM and FM needs analysis.
- Preliminary look at affordability landscape

NPC Data Overview: 2011-12

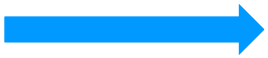
Total NPC Accesses		
	Frequency	Percent
2010	11,272	1.1
2011	733,436	71.8
2012	277,078	27.1
Total	1,021,786	100.0

Eliminate non-dependents, calculations before October 2011, international students

Student Region		
	Frequency	Percent
Middle States	203,953	26.1
South	175,899	22.5
MidWest	149,163	19.1
Western States	104,713	13.4
New England	84,047	10.8
Southwest	32,813	4.2
Unknown	30,596	3.9
Total	781,184	100.0

- Overall, Net Price is about 60 to 80% cost for Publics, 50 to 65% for Privates
- Completion rates (hits to full info) generally runs in the 70-80% range for typical Public and Private 4-yr colleges

Eliminate incomplete records and those with insufficient data to generate family contribution estimates



Cost, Price and Family Contribution (FM) by College Type						
	NPC Completion Rate	Cost	Net Price	NP/Cost	EFC	N
For Profit	47%	36,918	32,711	89%	12,424	7,387
Other Public	56%	17,970	13,767	77%	11,230	2,238
Public Masters	71%	23,429	17,101	73%	13,522	16,119
Public Doctoral	71%	32,592	22,246	68%	20,122	105,231
Public Baccalaureate	69%	27,335	17,644	65%	14,405	4,500
Other Private	75%	41,048	26,076	64%	18,469	13,586
Private Masters	77%	43,249	27,227	63%	20,296	62,497
Unclassified	73%	49,572	27,813	56%	23,246	21,716
Private Doctoral	79%	57,028	28,888	51%	25,951	204,784
Private Baccalaureate	82%	50,827	25,611	50%	23,596	159,644
Total	77%	47,470	26,155	55%	22,791	597,702

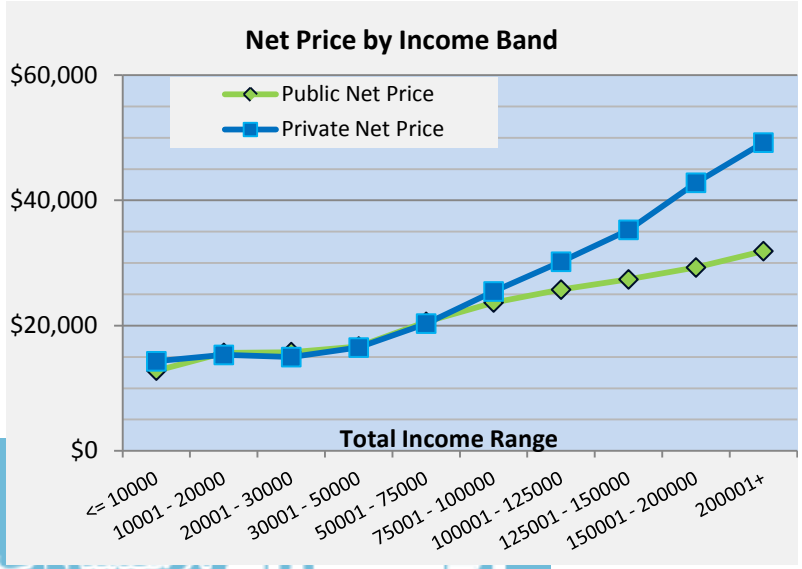
Net Price and Income

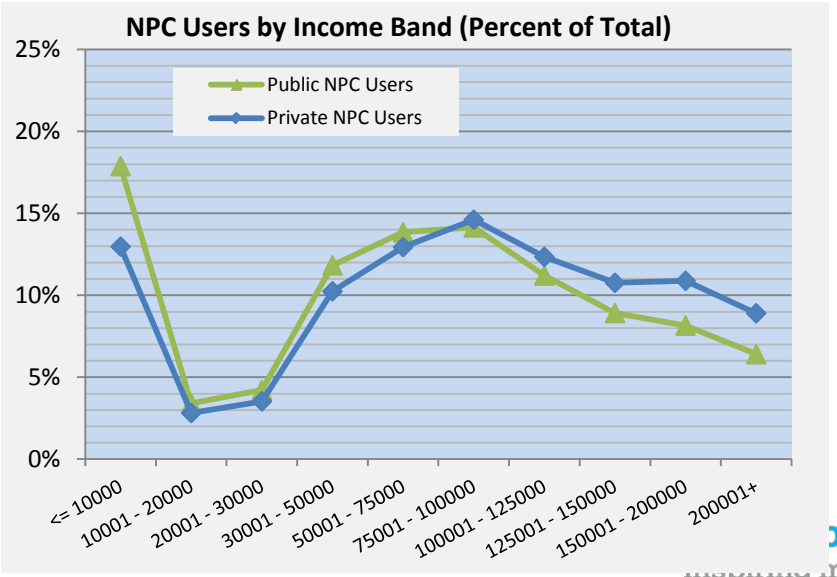
Focus on Public vs. Private

Combine data from Doctoral, MA and BA Colleges

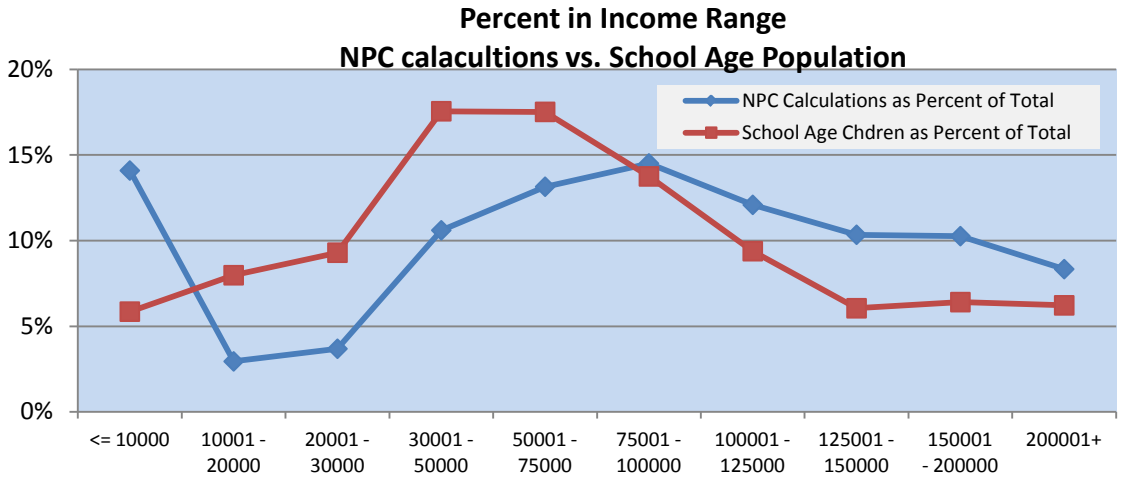
Net Price by Income Band (Public vs. Private, BA and up)				
Income Band	NET_PRICE			
	Mean		Percent in Income Group	
	Public	Private	Public	Private
<= 10000	12,814	14,303	18%	13%
10001 - 20000	15,640	15,319	3%	3%
20001 - 30000	15,777	14,975	4%	4%
30001 - 50000	16,666	16,495	12%	10%
50001 - 75000	20,607	20,324	14%	13%
75001 - 100000	23,694	25,451	14%	15%
100001 - 125000	25,748	30,199	11%	12%
125001 - 150000	27,383	35,291	9%	11%
150001 - 200000	29,283	42,809	8%	11%
200001+	31,895	49,221	6%	9%
Total	21,422	27,419	100%	100%
		Total N	125827	426853

- Below $100,000 Public and Private are very similar on Net Price
- Above $100,000 Net Price diverges with Private > Public
- Similar distribution of NPC users across income levels for Public and Private, with slight shift towards higher income for users at Private Colleges

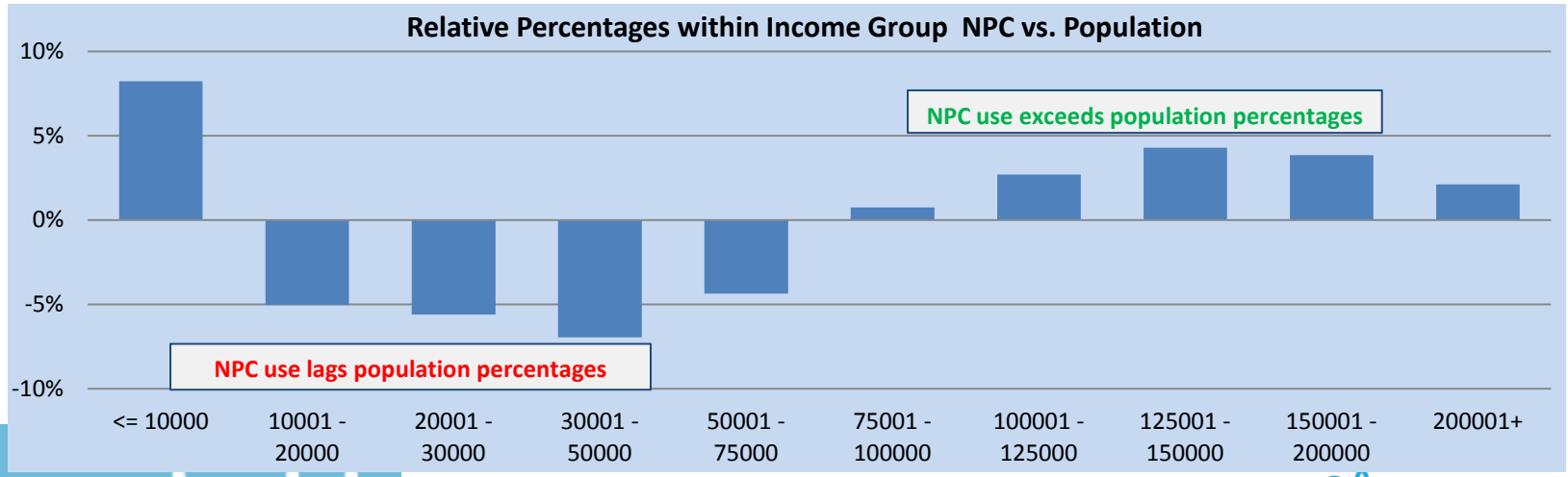




Who is using NPC Calculators



- Relative to the overall population, NPC usage tends to be over-representative of students from upper-income and very low income families
- Students from Middle-to-lower income families are under-represented



Source: U.S. Census Bureau, Current Population Survey, 2012 Annual Social and Economic Supplement.

Summary – Mandate vs. Opportunity

- Net Price Calculators are in widespread use and provide a pre-application window on families who are concerned about affordability
- Preliminary information suggests that there is general consensus between public and private colleges on expected family contribution across income levels
- Current aid policies appear to cancel out public vs. private prices differences for middle to lower income families, however net prices diverge for families making more than $75,000 with private education becoming significantly more expensive.
- Within our restricted sample, IM and FM methodologies yield similar average family contribution estimates, with major difference being the IM option for a Student Contribution regardless of income level.
- NPC Calculators are an important tool for communicating more realistic information about net price – versus “sticker price”. However, the early data suggest that while the message appears to be reaching students from very low income families, additional opportunities may exist to reach prospective students from families in the $10k-$50k income range.

Net Price Calculator Requirement

- In accordance with the *Higher Education Opportunity Act* of 2008 (HEOA), by October 29, 2011, each postsecondary institution that participates in Title IV federal student aid programs must post a net price calculator on its website that uses institutional data to provide estimated net price information to current and prospective students and their families based on a student's individual circumstances. This calculator should allow students to calculate an estimated net price of attendance at an institution (defined as cost (price) of attendance minus grant and scholarship aid) based on what similar students paid in a previous year. The net price calculator is required for all Title IV institutions that enroll full-time, first-time degree- or certificate-seeking undergraduate students.

Questions?

Greg Perfetto

Enrollment Research

The College Board

gperfetto@collegeboard.org

NATIONAL STUDENT CLEARINGHOUSE®

The Changing Landscape of How We Understand Postsecondary Pathways – With a Focus on Transfer Students and Persistence Anywhere

The College Board Annual Forum

Miami, FL

October 26, 2012

Don Hossler
Professor of Educational Leadership & Policy Studies, Indiana University &
Senior Consultant, National Student Clearinghouse Research Center

My Goals Today

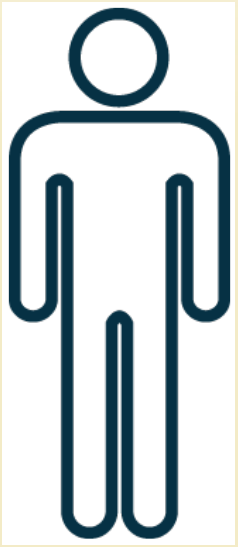
- Expand thinking beyond what we typically ***think we know*** from IPEDS, SLDS systems, or institutional views of enrollment patterns.
- Better understand the actual enrollment patterns of many students
- Encourage you to start playing “what if” with your own data by linking it with data held by the Clearinghouse.
- A more complex look at transfer students.

A Tale of Two Students

Traditional Student

Retention at Institution of Origin

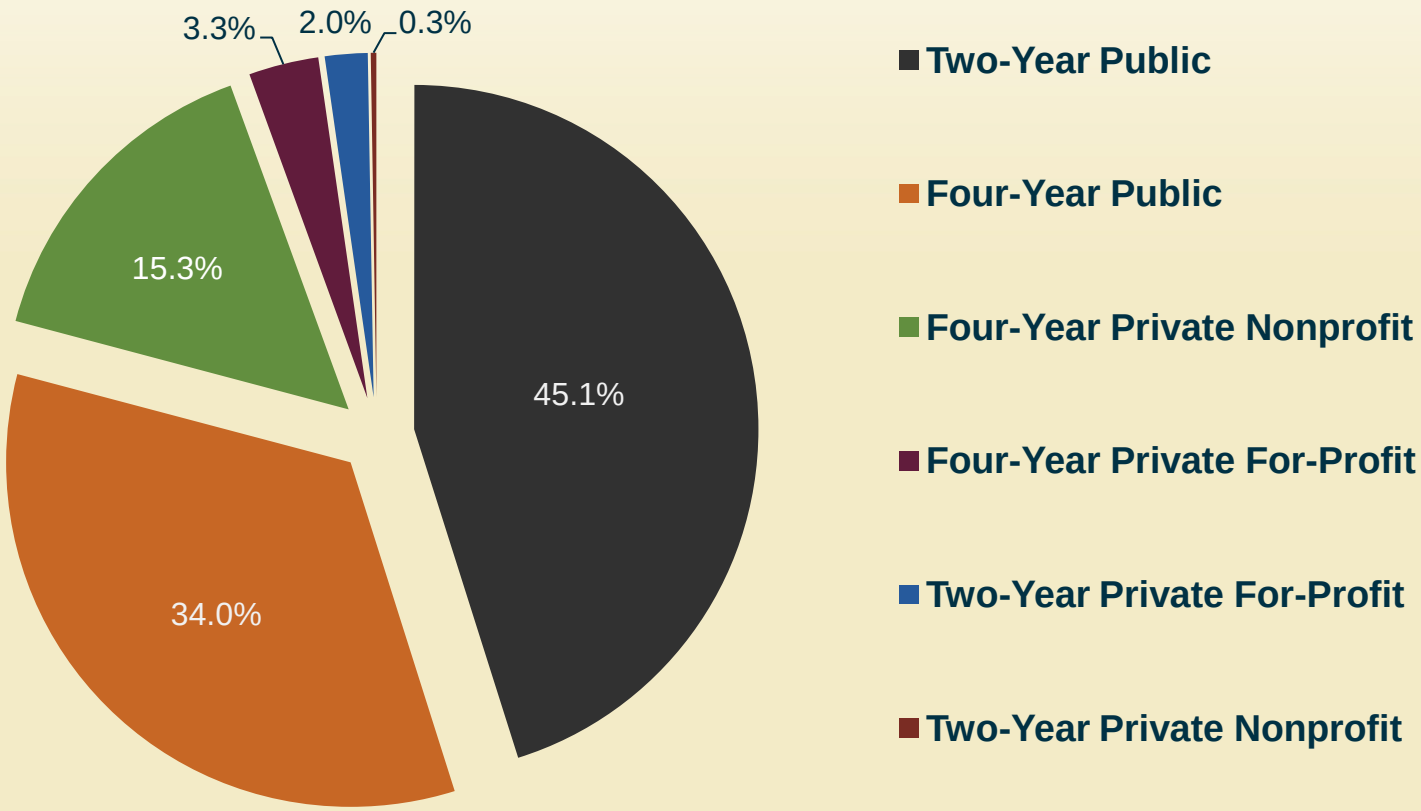
Mobile Student



Persistence Anywhere

Entering cohort of fall 2006

- 2.8 million unique students reported to NSC (full- and part-time)



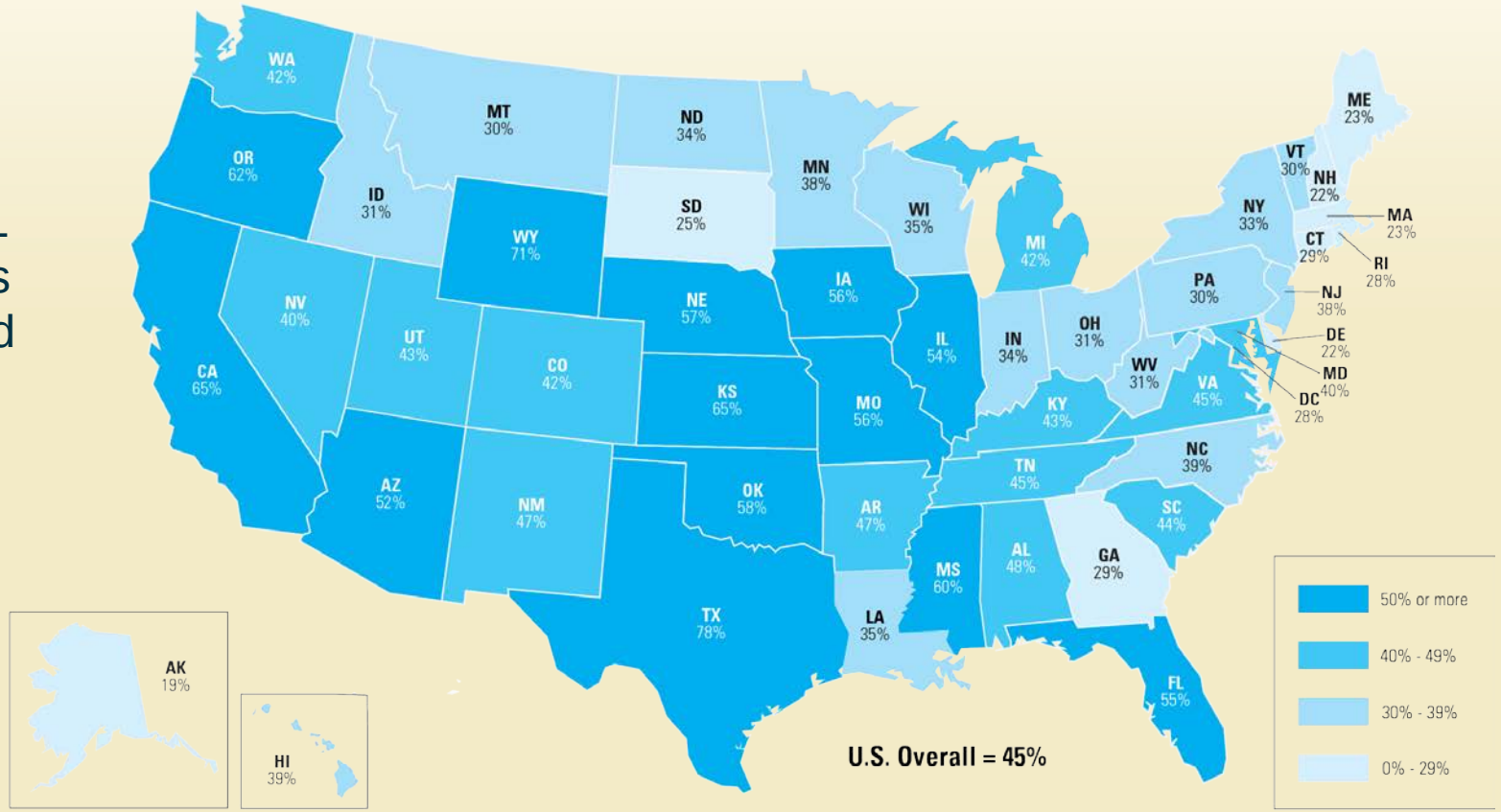
Analysis

- Tracked each student for up to five years or first degree
- Identified mobility and transfer:
  - *Any change of institution prior to first degree completion*
- All enrollment terms counted, including summer
- Origin institution
- Destination institution

Snapshot™ REPORT

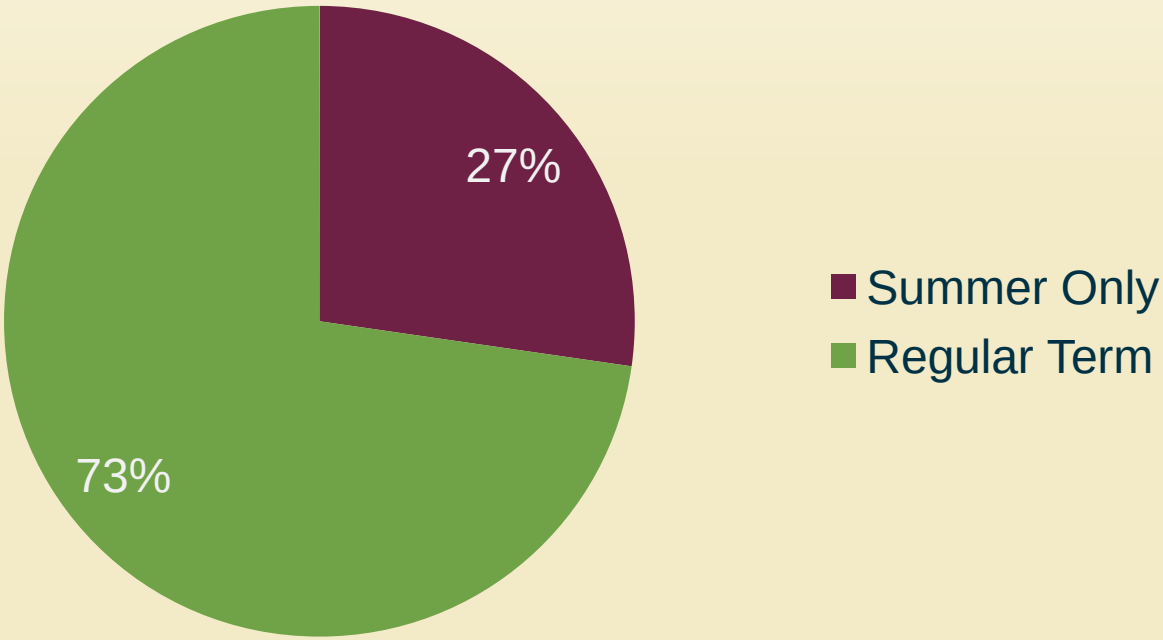
45 Percent of Four-Year Degrees Go to Students with Previous Enrollment in a Two-Year Institution

2010/11 degrees awarded

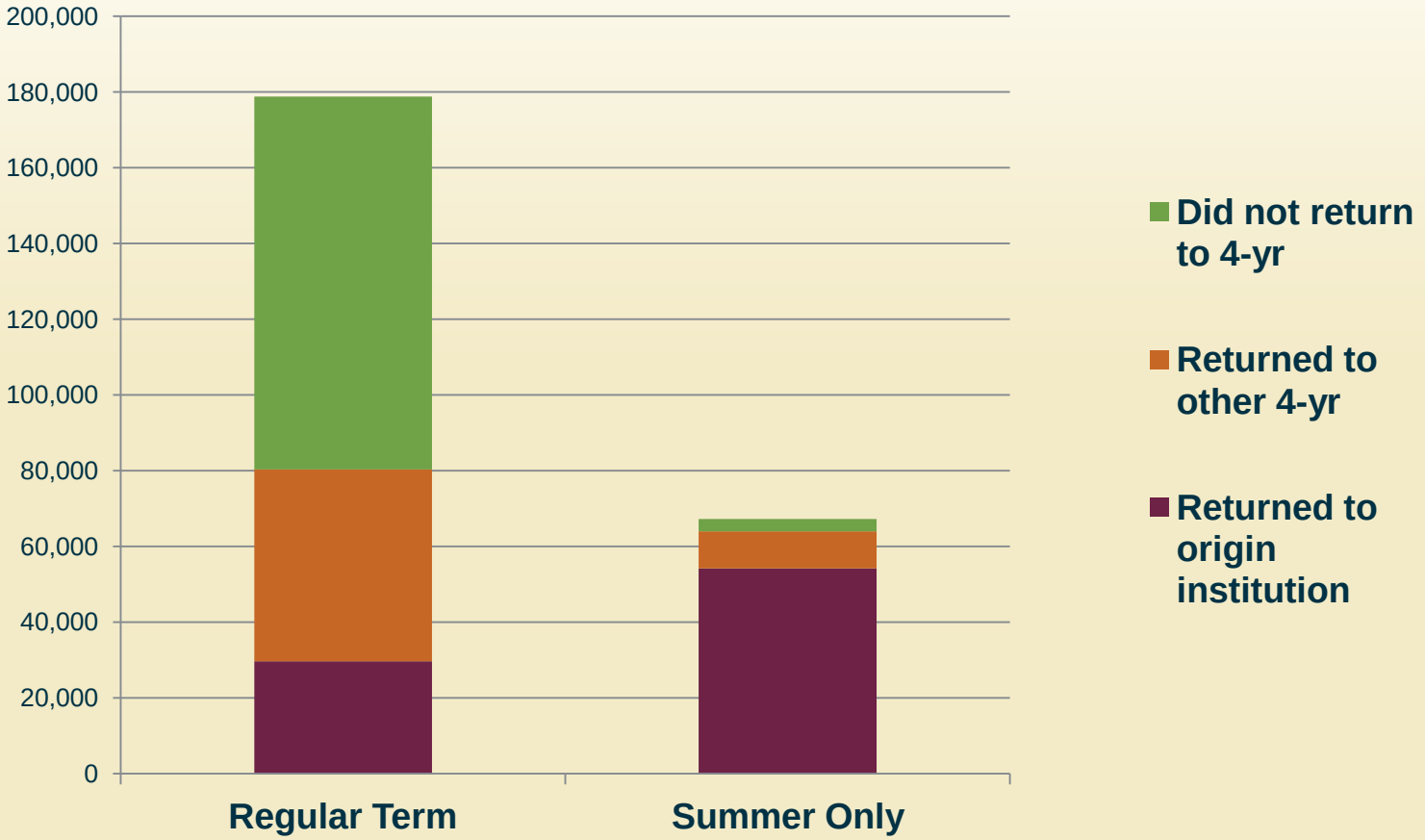


*Students were considered enrolled at two-year institutions if they had at least one full-time or part-time enrollment at a two-year institution prior to the four-year completion date.

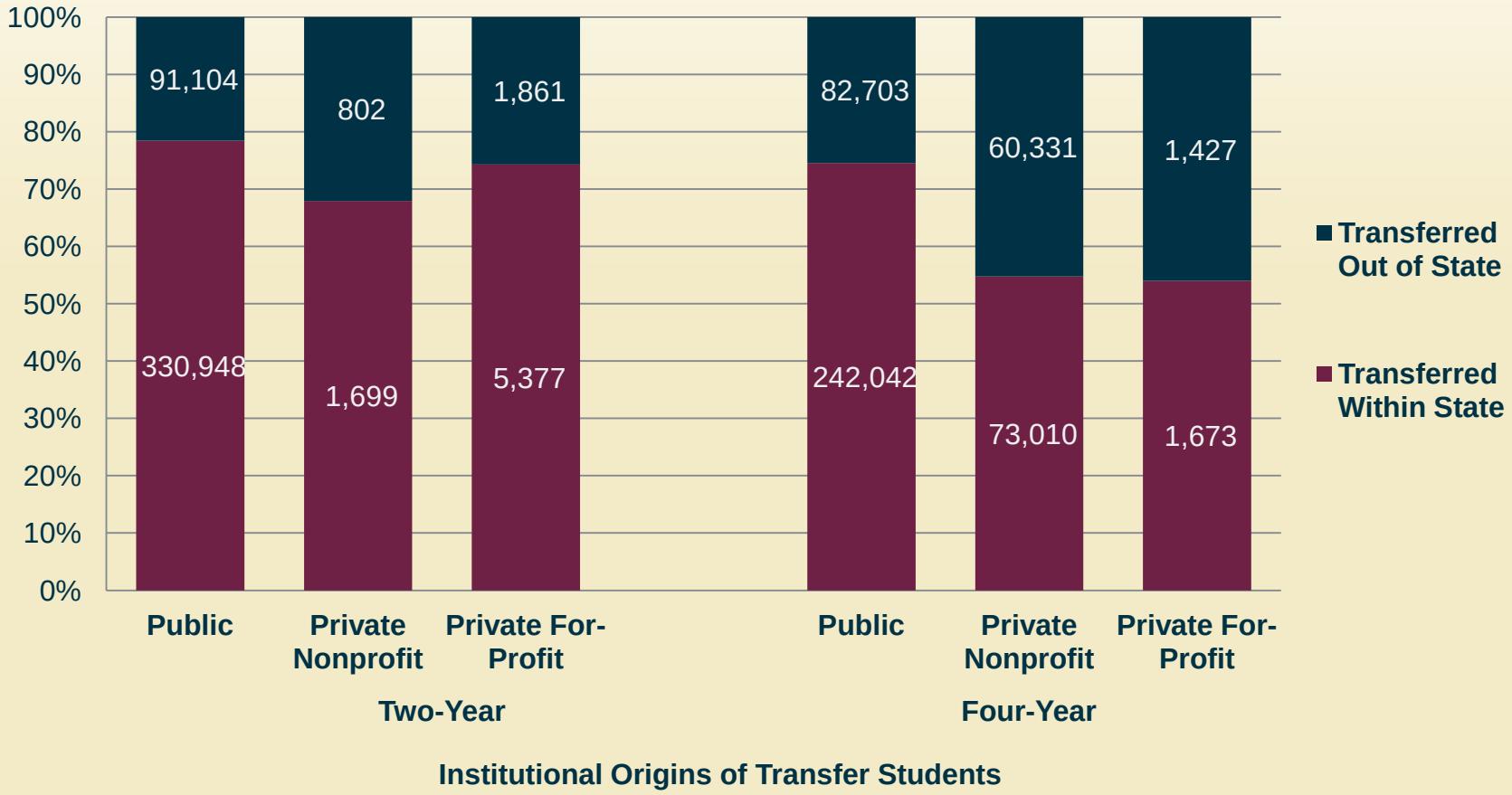
27% of 4-to-2 Mobility/Reverse Transfer Students Enroll at the Two-Year Institution Only During Summer Months



The Pathways for Reverse Transfers - Summer



27 Percent of All Students Who Changed Institutions Also Crossed a State Line



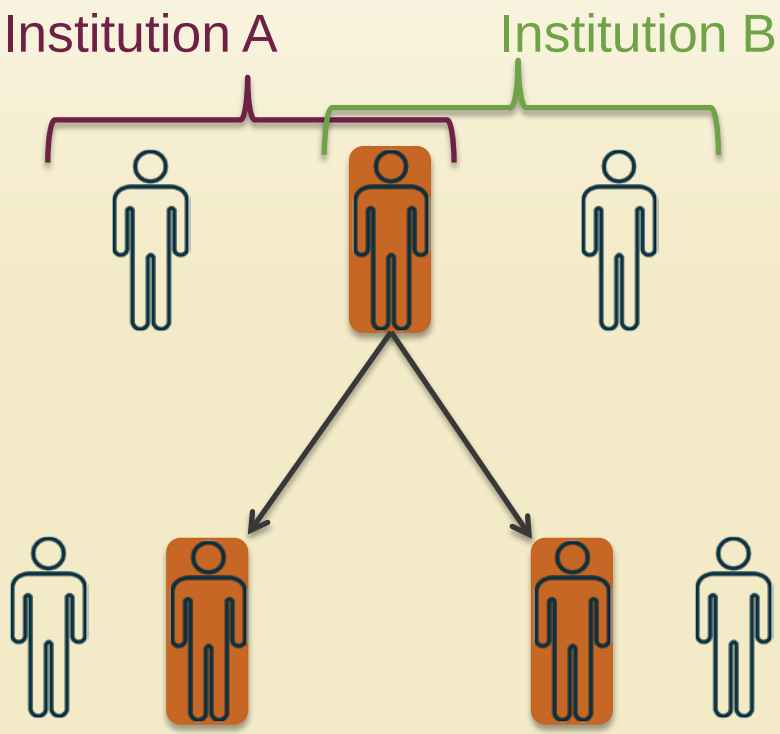
Bottom Line:
One-Third of Students Enroll in a Different Institution within Five Years of Their First Enrollment Term or by the Time they Earn a Degree

(whichever comes first)

Prevalence of Transfer and Mobility Among All Students in Entry Cohort, Fall 2006		
	N	%
Transfers	923,196	33.1%
Non-Transfers	1,869,765	67.0%
Total	2,792,961	100.0%

That's *Half* of Each Institution's Students (on average)

U.S. View
(unique students)



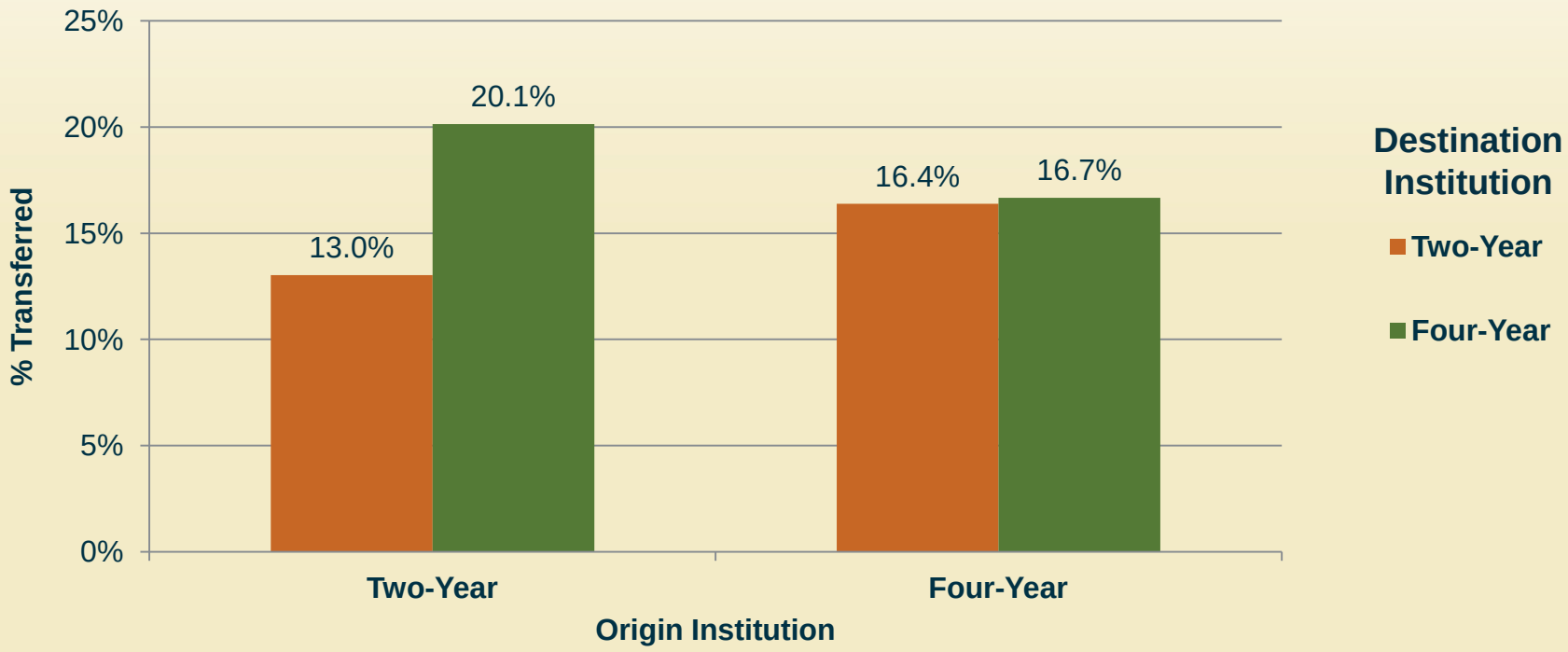
Institution A View

Institution B View

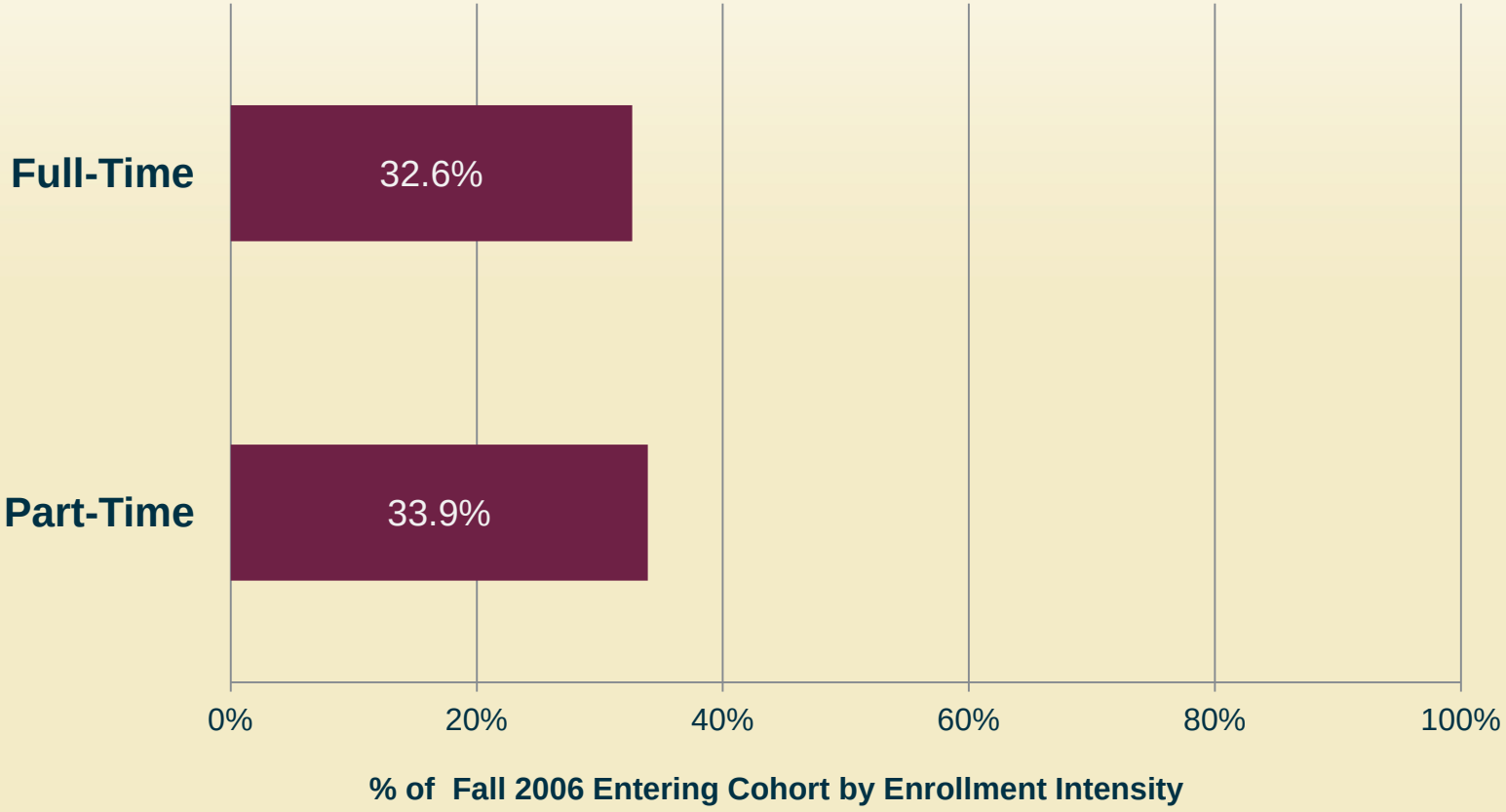
Within the Mobile Students group, One-Quarter Moved More Than Once

Frequency of Transfer & Mobility, 2006–11		
	N	%
Once	688,946	74.6%
Twice	156,638	17.0%
Three Times or More	77,613	8.4%
Total All Mobile Students	923,196	100.0%

Mobility & Transfer Rates by Level of Origin and Destination Institution



Transfer & Mobility Rates by Enrollment Intensity



Some Key Takeaways

- One-third of all students transferred at least once within five years
- Transfer and mobility rates were similar for part- and full-time students, public, and private nonprofit students
- Of those who transfer:
  - Most prevalent destination was a public two-year (43 percent)
  - One-quarter of mobile students transfer or move more than once
  - More than one-quarter move across state lines (27 percent)

Traditional View

- 1/2 is hard to forget
- Education as time, place
- Institutional home
- Graduation rate
- How many students complete vs. dropout
- Fear the data

Mobile View

- 1/2 is hard to ignore
- Education as career, path
- Institutional stepping stone
- Network path efficiency
- How do institutions bend student trajectories
- Free the data

Final Comments

- For public policy makers
  - Without clear and accurate information on student enrollment patterns it is impossible to develop public policy incentives that will lead to desired outcomes.
- For Institutional Policy Makers
  - You cannot develop sound enrollment management plans if you lack a clear understanding of the enrollment patterns of your students.

Thank You

Research Center Snapshots and Reports:
http://research.studentclearinghouse.org/

Don Hossler
hossler@indiana.edu

The College Completion Agenda

From "Education for Education's Sake" to Return on Investment and Gainful Employment

Patrick J. Kelly

NCHEMS

National Center for Higher Education Management Systems

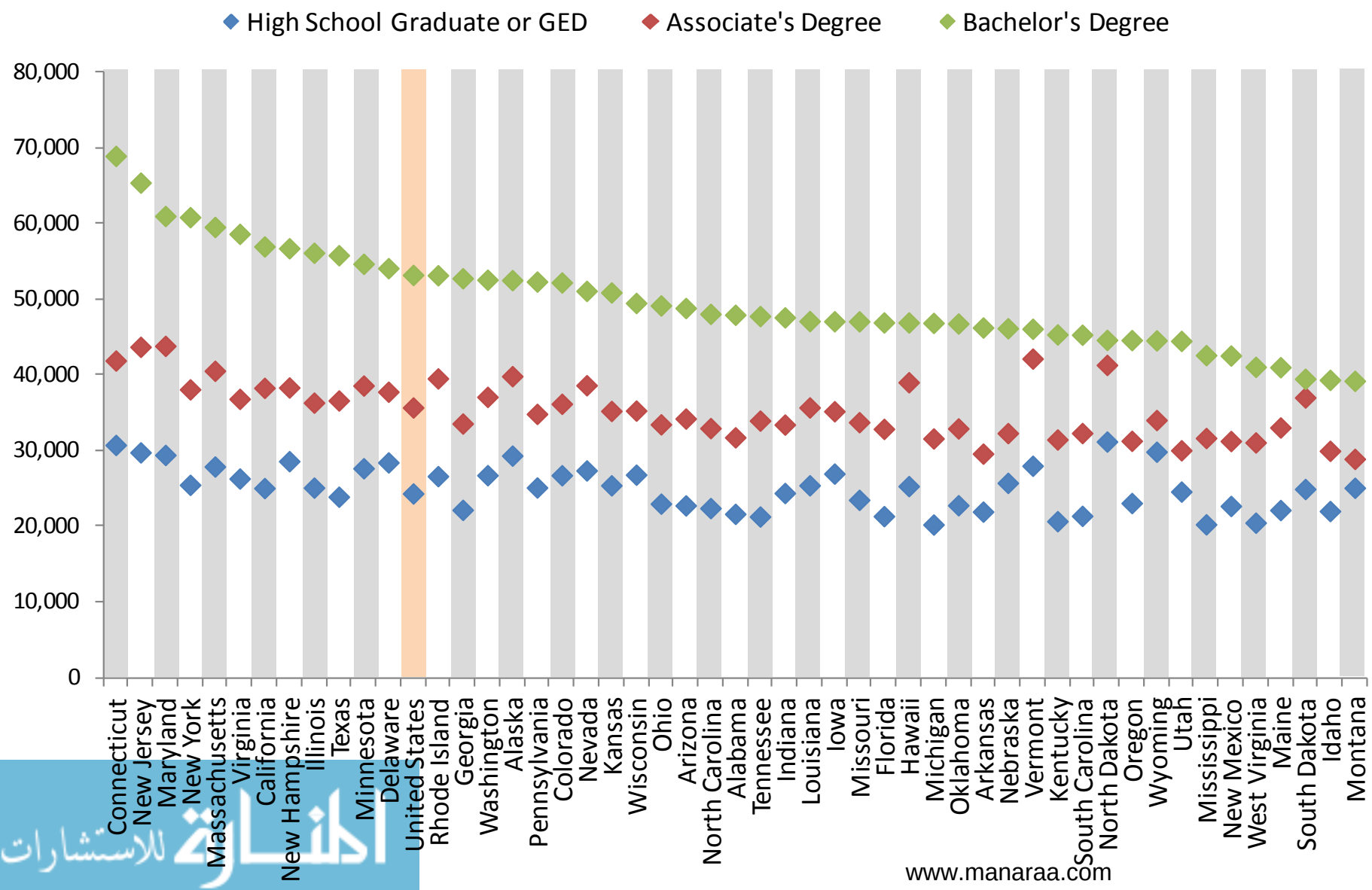
Why ROI and Gainful Employment?

- State policymakers are realizing they can't afford to reach the postsecondary goals they are targeting under "business as usual" scenarios.

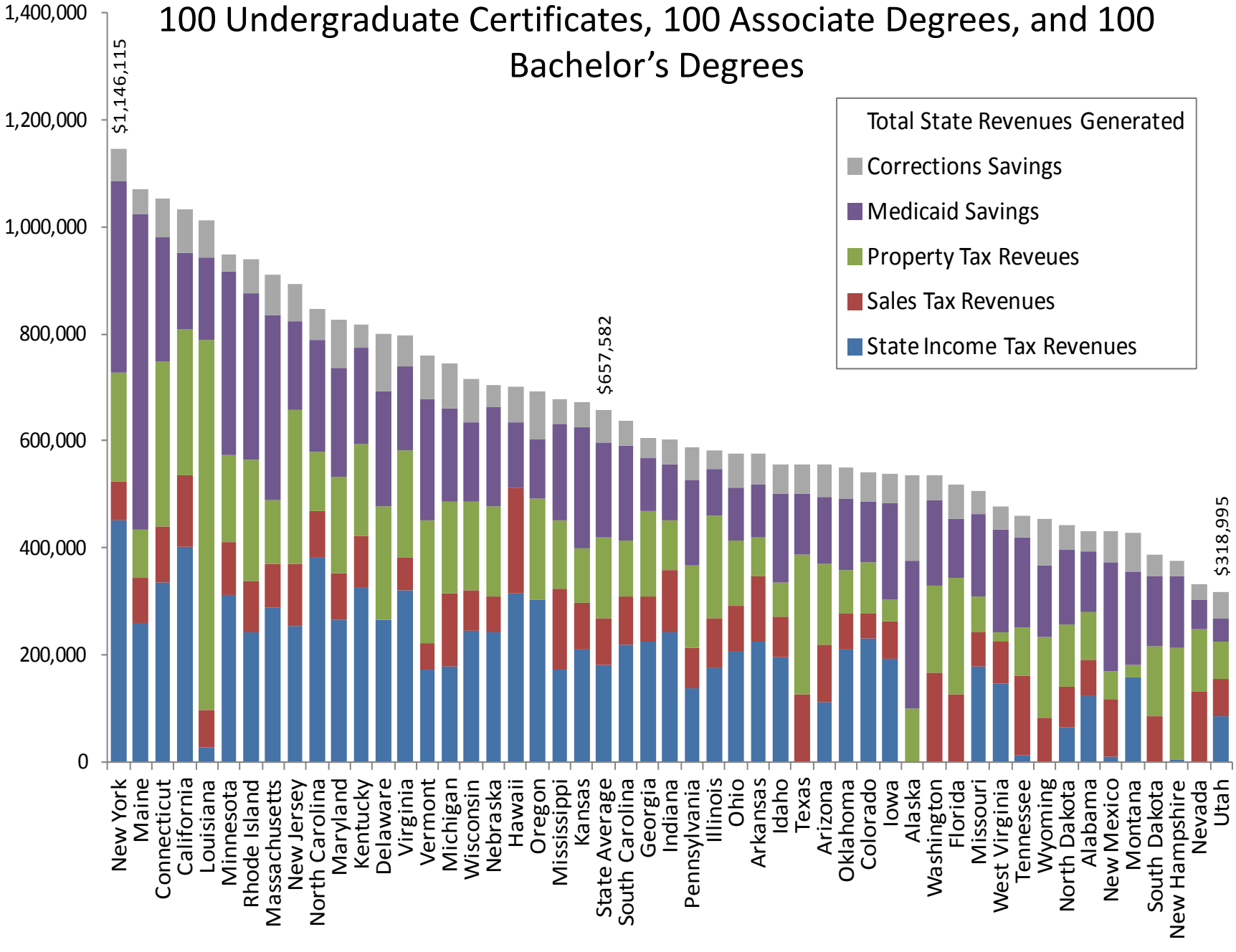
- Beyond the Federal concern about Pell grants and loan repayment, the economic recession has led many state policymakers to heightened awareness of the mismatch between the graduates being produced (and their skills) and employer demand.

Return on Investment

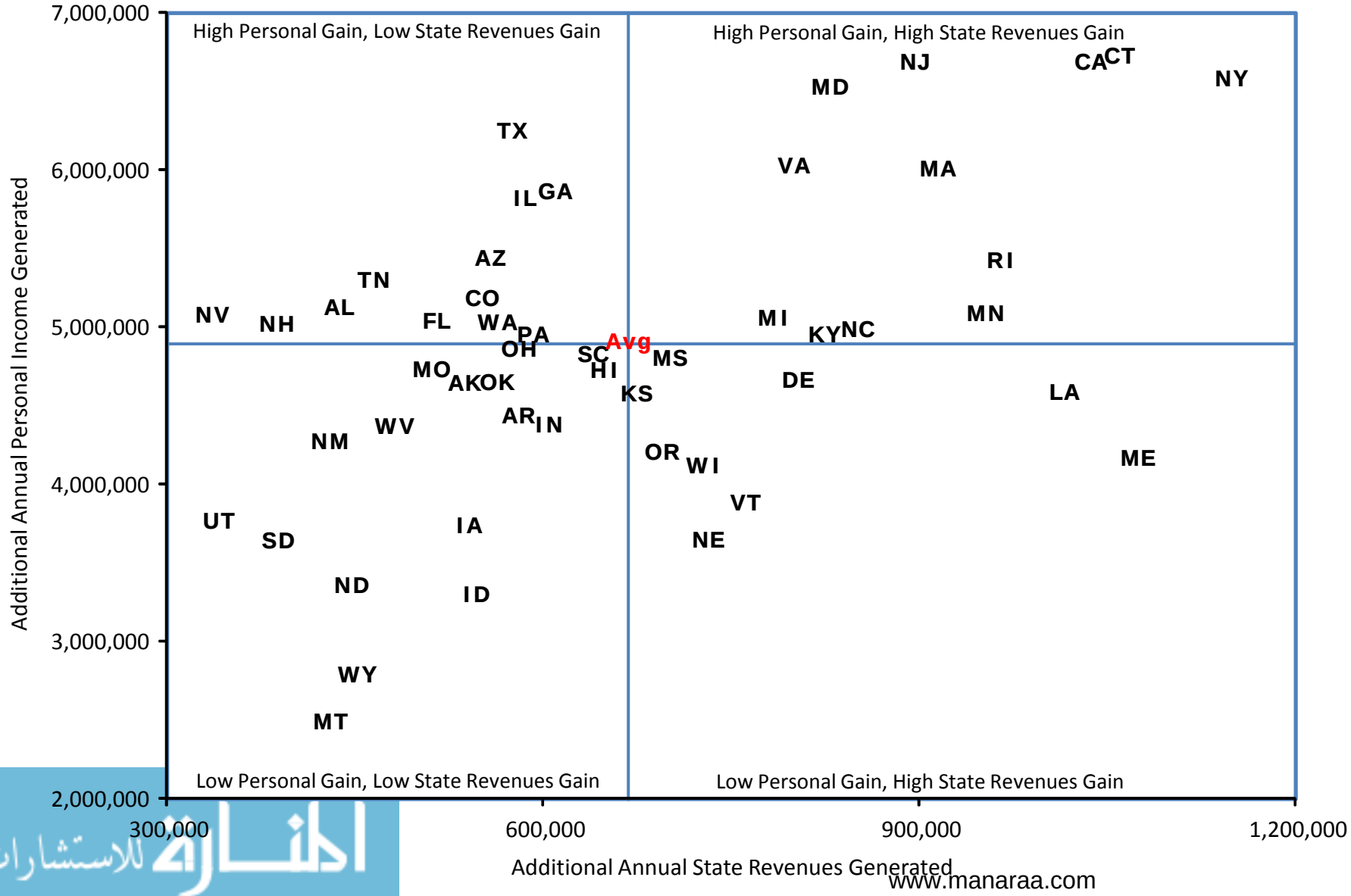
Median Annual Wage Earnings by Level of Education Attained 25 to 64 Year Olds (2010)



State Returns by Source if Each State Produced an Additional 100 Undergraduate Certificates, 100 Associate Degrees, and 100 Bachelor's Degrees



The Personal and State Returns if Each State Produced an Additional 100 Undergraduate Certificates, 100 Associate Degrees, and 100 Bachelor's Degrees



Calculating the Economic Value of Increasing College Credentials by 2025
United States

Start Over | Save Scenario | Print Page

Increase College Attainment | View Returns on Investment | Instructions and Definitions

Set Postsecondary Performance Goals for Year 2025

Increase College Access

Avg. Performance of Top 3 States

High School Graduation Rate	87.0%
College-Going Rate Directly from High School	75.0%
20 to 39 Year Olds Enrolled in College	2.40%

Increase Number of College Credentials

Undergraduate Credentials Awarded per 100 Students

Public Research	26.0
Public Bachelor's and Master's	24.4
Public Two-Year	42.7
Private Colleges	37.2

Change Enrollment Patterns of Additional First-Time Students

	Directly from High School	20 to 39 Year Olds
Public Research	24%	3%
Public Bachelor's and Master's	18%	5%
Public Two-Year	34%	62%
Private Sector	25%	30%
Must Equal 100%	100%	100%

2025 Enrollment patterns of additional first-time students as a result of the improvements made

Optional: Set 2025 College Attainment Goal (%) 60.0

(Current College Attainment of 25 to 64 Year Olds is 38.3%)

Gap: Additional Degrees Needed to Meet 24,305,885

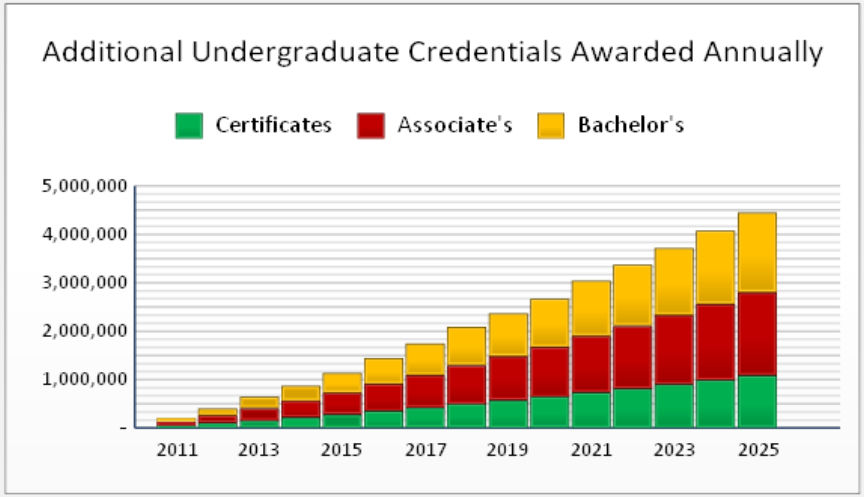
Results: Additional Undergraduate Credentials Awarded by 2025

Associate's 12,412,476 + Bachelor's 12,002,697

= Additional Degrees 24,415,173

Undergraduate Certificates 7,851,437

Total Additional Undergraduate Credentials 32,266,610



Note: The default positions reflect current rates and values. The results in 2025 assume linear progress toward goals.

Created by NCHEMS and CLASP

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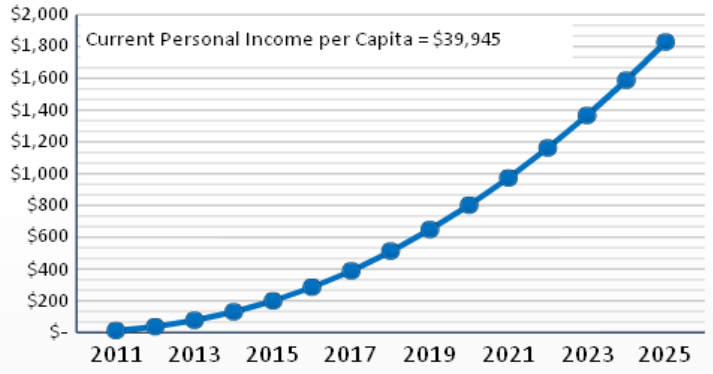
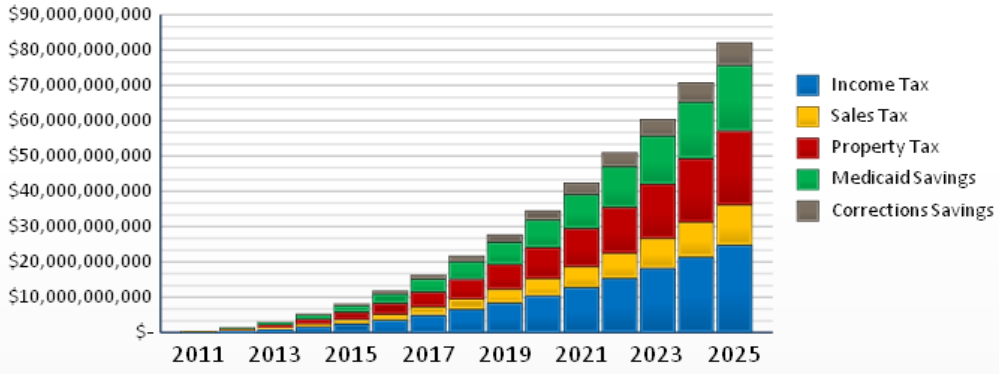
Change in Personal Income per Capita

In Current $



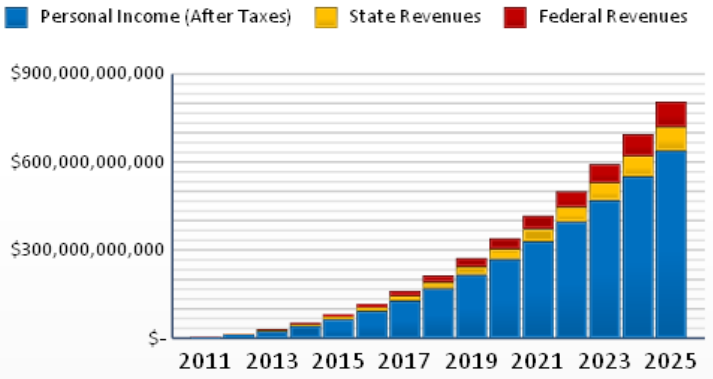
Additional State Revenues Generated

In Current $



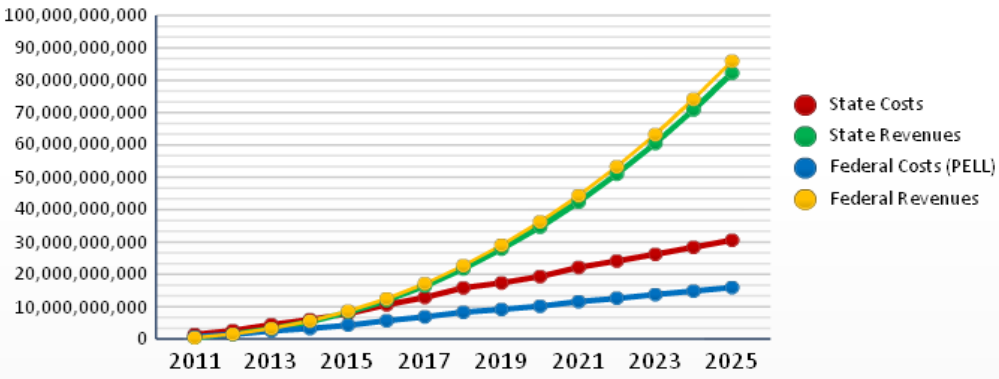
Additional Revenues Generated

In Current $



State and Federal Costs vs Revenues Generated

In Current $



Note: The default positions reflect current rates and values. The results in 2025 assume linear progress toward goals.

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Gainful Employment

Environmental Pressures

- Federal Gainful Employment
- Effective utilization of federal SLDS grants
- College attainment/completion goals – state retention of graduates and economic returns
- Increased focus on “credentials of value” – the attainment of credentials of less than two-years in length (primarily) that yield living/competitive wages
- Meeting employment demand in key areas – e.g. health, education, STEM, trades
- Increasing need for employment outcomes data to make the case for continued investment (state and federal policymaking environments)

The Data are Simple

Institution Records

- Completions
- Level of Award (Certificate, Associates, Bachelor's Masters, Doctorate, Professional)
- CIP Code of Award – Field of Study
- Origin of Student
- Continued Enrollment

Data Available by Term

Link SSN

Employment/Wage Records

- Employed – record in the database (excludes self employed, military, and employed out-of-state)
- Earnings
- Industry of Employment
- Region of Employment

Data Available Quarterly

Major Questions Answered

- What percentage of the graduates are employed in-state – by level and type of award?
- Are the graduates employed in the region in which they graduate?
- What are their quarterly earnings?
- What industries are the employed in? (only relevant in a few fields)
- What percentage continue to enroll/persist in postsecondary education?

Most Effective Uses of the Data

- **State brain drain**. Is the state retaining the graduates it produces? How is it changing over time? (the impact on the degree and attainment goals of the state).

- **State-level supply and demand**. What is the employment status of graduates in key areas of demand for the state? E.g. health and STEM fields, certain trades. Don't fall into the trap of overly detailed program-to-occupation supply and demand studies.

- **Regional supply and demand**. Are institutions producing graduates that meet local employer needs? What are the employment status and wages of the graduates they produce?

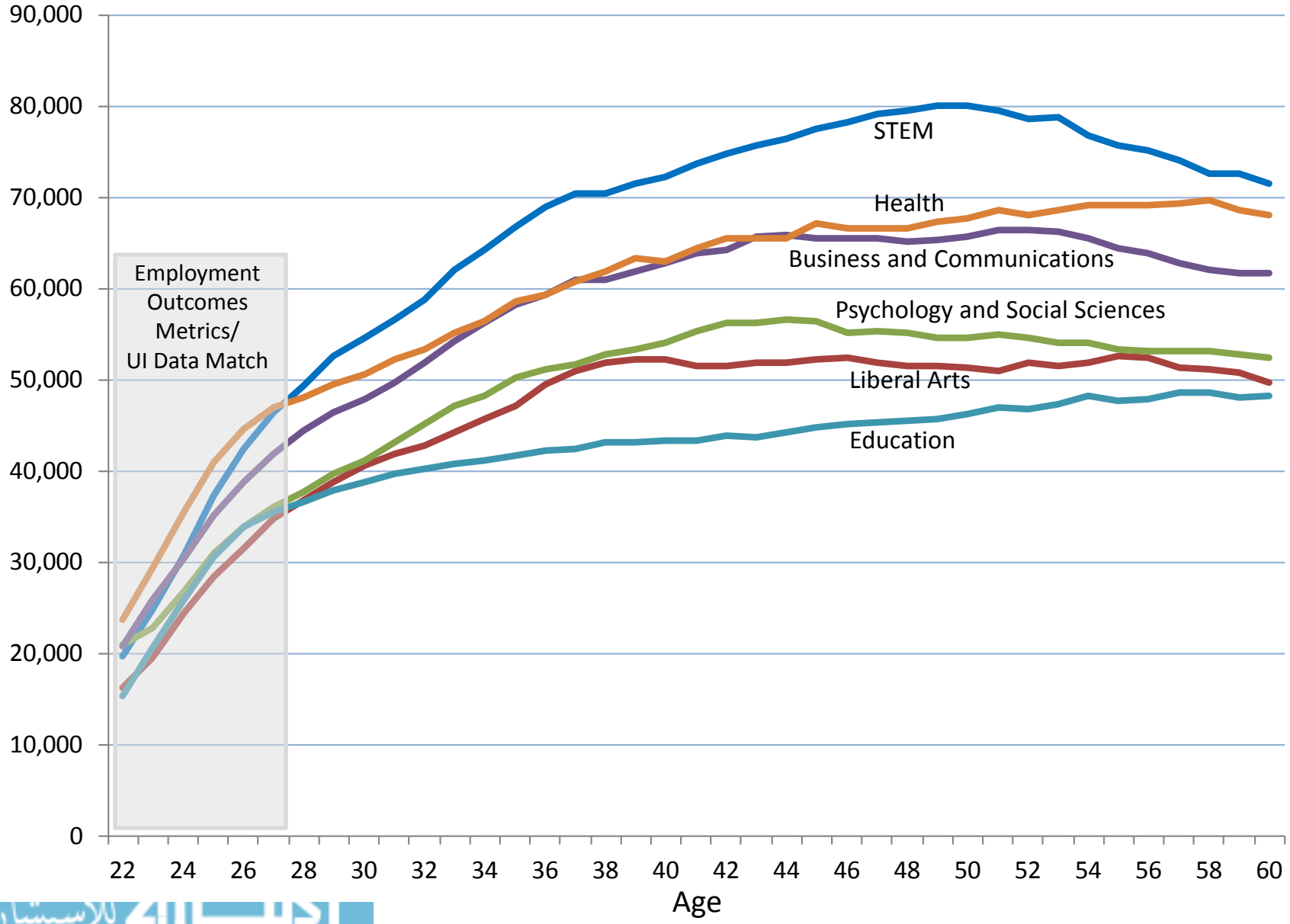
- **Information for students and families**. What programs provide the highest wages in the short-run? What programs are more likely to require continued education upon completion?

Institutional Accountability (Difficult)

- Small numbers of graduates for many programs
- It is very difficult to calculate the "value added" by institution – i.e. the likely employment and wages of students had they not completed their college credentials
- The state economy treats graduates from some institutions better than graduates from others (with the same credentials) – the "prestige" factor
- Institutions serving large numbers of place-bound students are victims of their local economy (e.g. a part of the state that has low wages relative to other parts of the state)
- The difficult balance between directing students into programs with competitive wages and providing student choice

Median Annual Wages by General Field of Study and Age (United States)

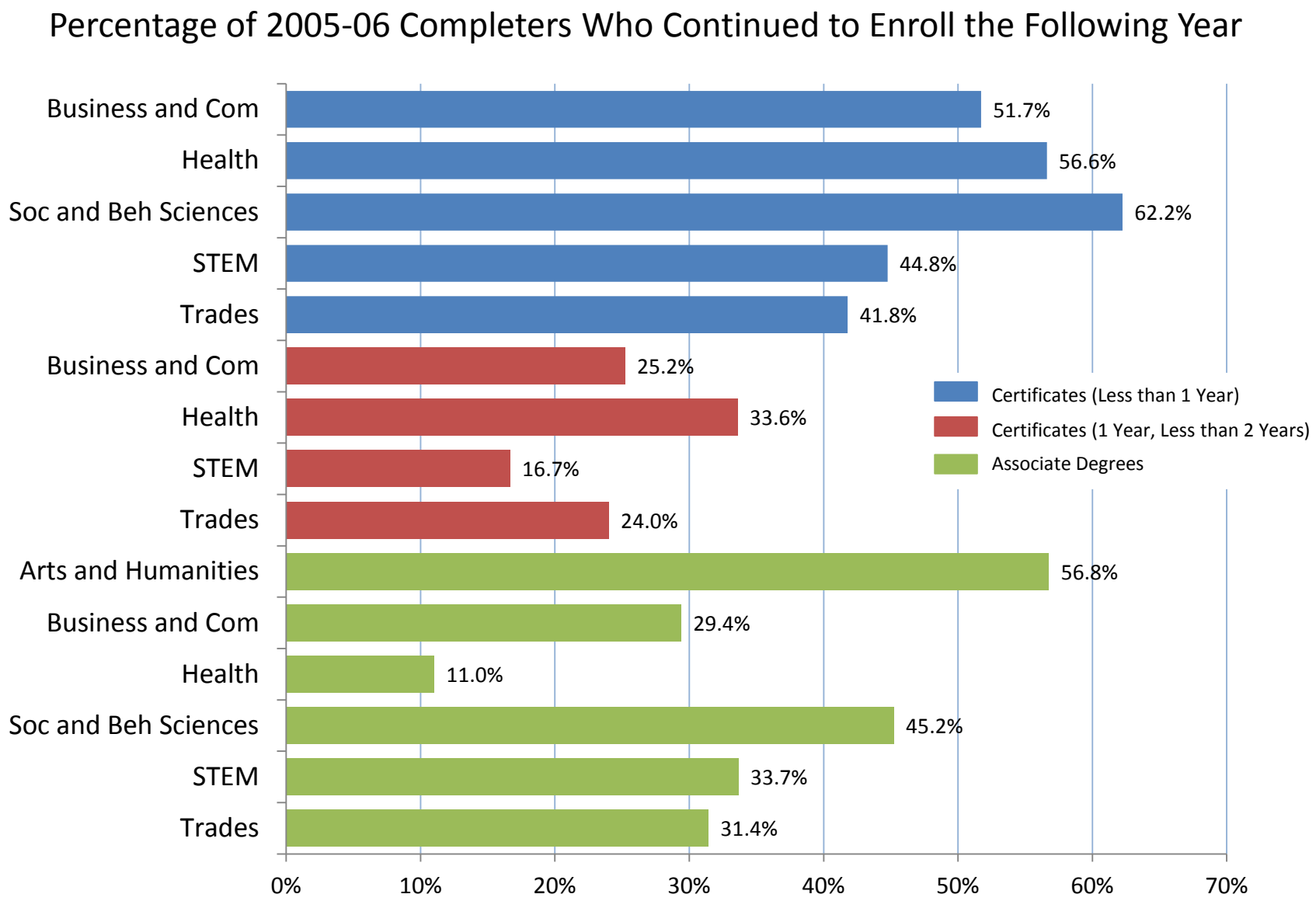
(Includes Only Bachelor's Degree Holders, Not Residents Who Earned Graduate/ Professional Degrees)



Source: U.S. Census Bureau, 2010 American Community Survey (Public Use Microdata Sample)

How Can We Tell a Story with the Data?

Many Students Re-Enrolled Following Completion



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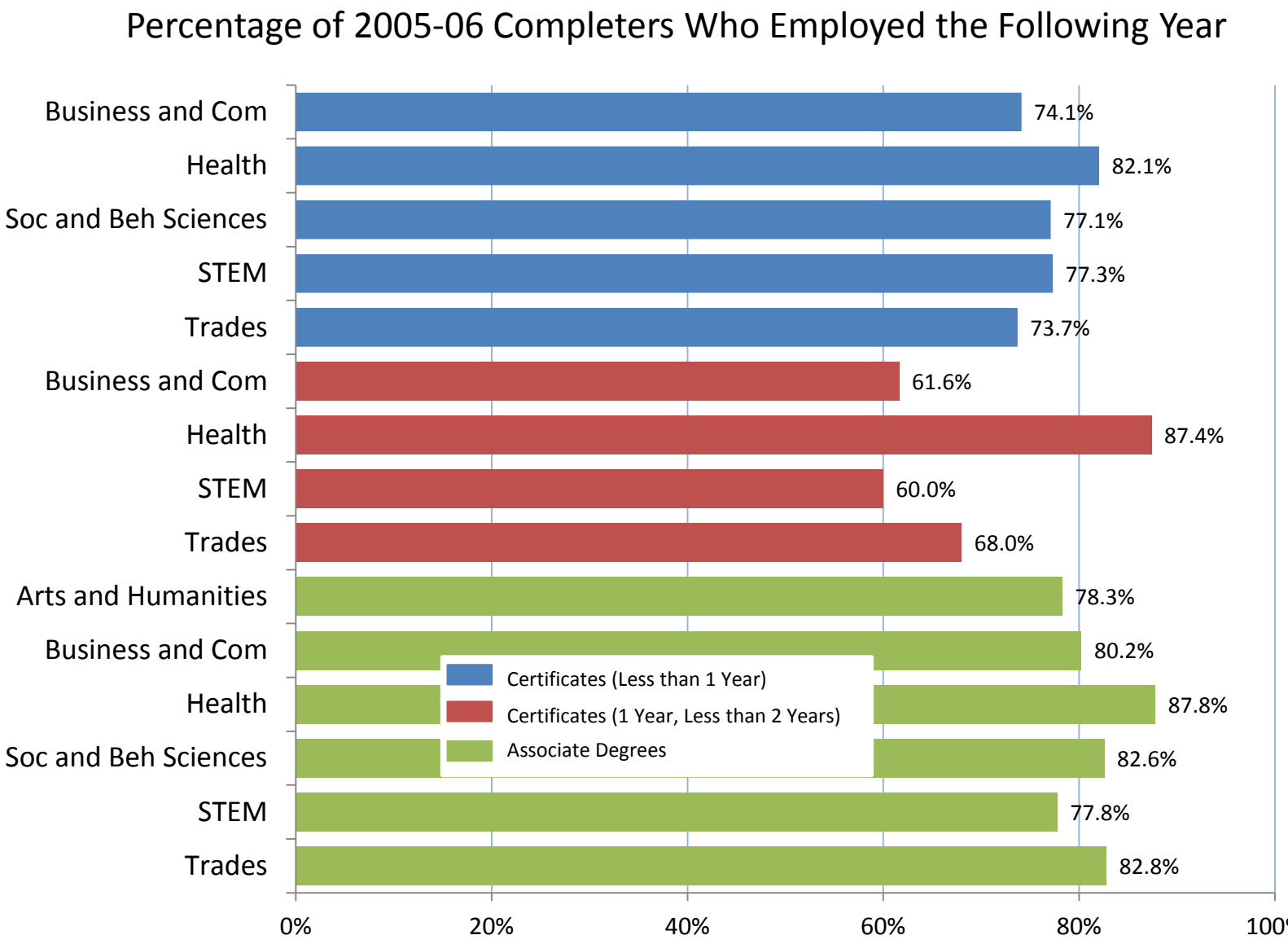
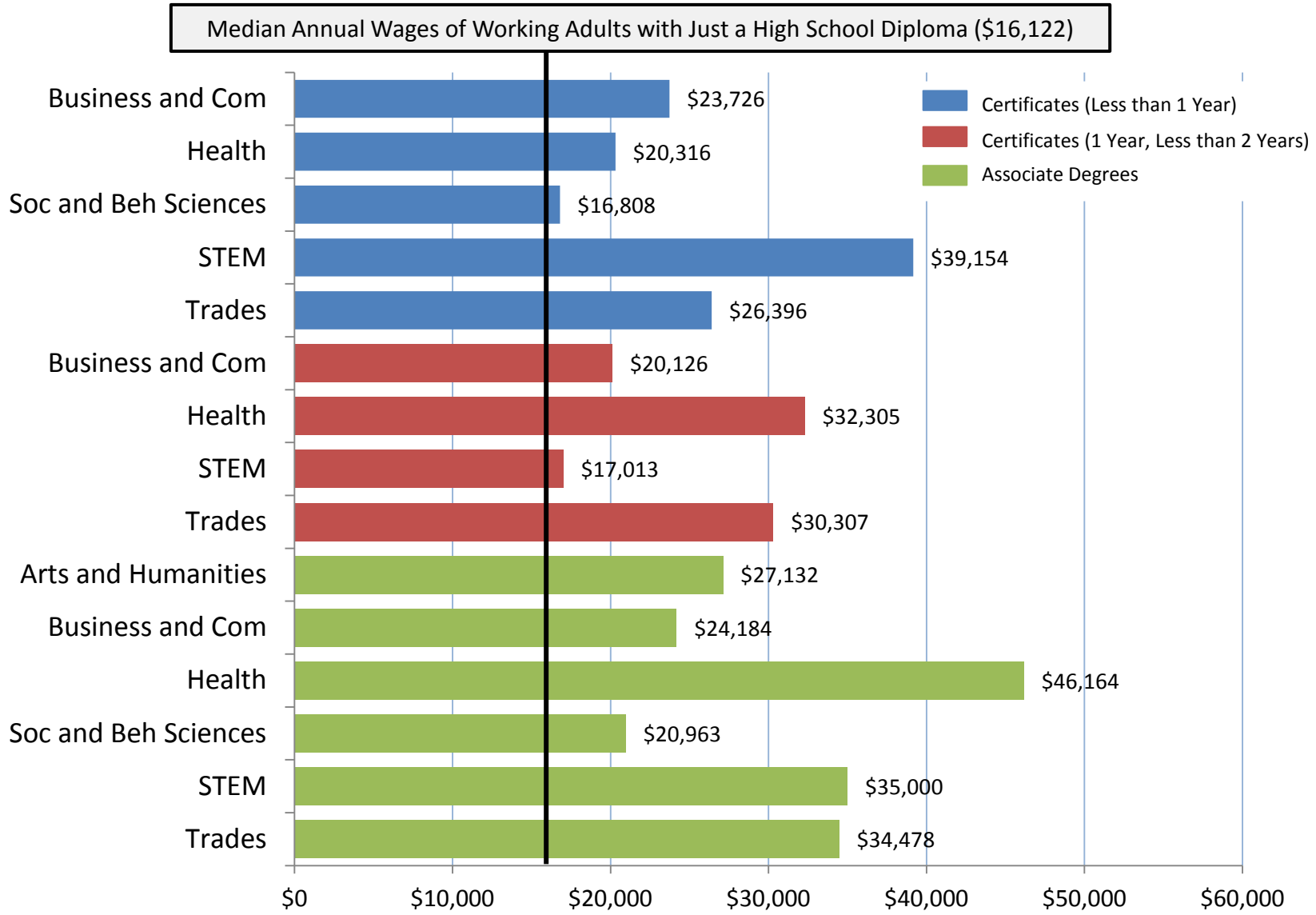
Of Those Who Didn't Re-Enroll, How Many are Employed in State?



NCHEMS

What are Their Median Annual Wages One Year After Completion?

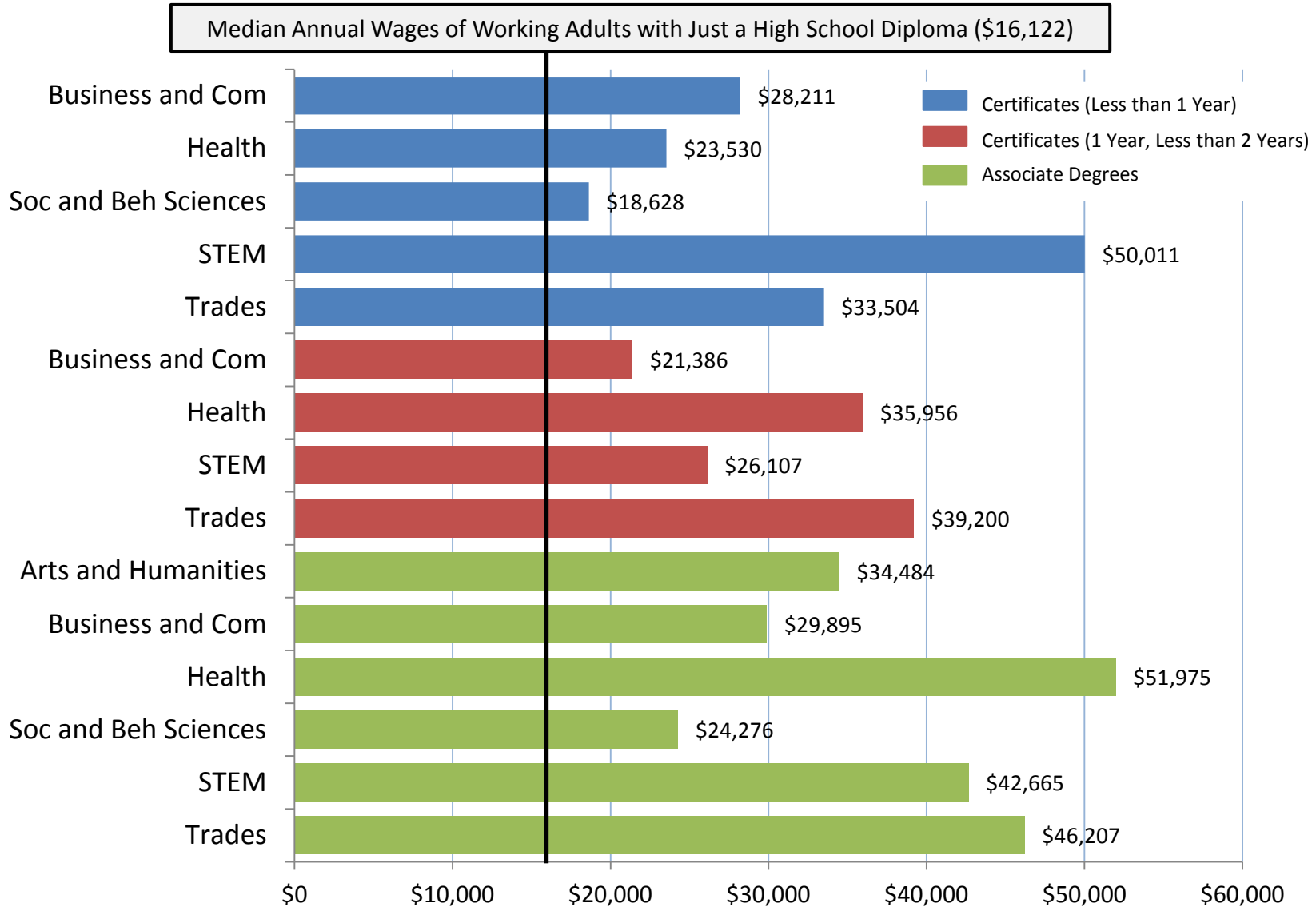
Median Annual Wages of 2005-06 Completers the Following Year



NCHEMS

What are Their Median Annual Wages Five Years After Completion?

Median Annual Wages of 2005-06 Completers Five Years After Completion



NCHEMS

Making the Case for the Graduating Cohort of 2005-06

Field of Completion	Employed Five Years Following Graduation					Median Annual Earnings					Total Personal Income Generated Above the High School Median Wqgae				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Business and Com	186	179	171	164	156	23,726	24,847	25,969	27,090	28,211	1,414,351	1,557,479	1,683,786	1,793,273	1,885,940
Health	718	674	631	587	543	20,316	21,120	21,923	22,726	23,530	3,011,349	3,369,578	3,657,505	3,875,132	4,022,457
Soc and Beh Sciences	101	97	94	90	86	16,808	17,263	17,718	18,173	18,628	69,290	110,967	149,232	184,084	215,523
STEM	167	161	155	149	143	39,154	41,868	44,582	47,296	50,011	3,846,344	4,145,130	4,411,347	4,644,993	4,846,070
Trades	569	540	510	481	451	26,396	28,173	29,950	31,727	33,504	5,846,134	6,501,676	7,052,382	7,498,251	7,839,282
Business and Com	53	52	52	51	50	20,126	20,441	20,756	21,071	21,386	212,233	225,688	238,670	251,179	263,216
Health	437	418	399	380	361	32,305	33,217	34,130	35,043	35,956	7,071,831	7,145,877	7,185,240	7,189,919	7,159,915
STEM	39	38	37	35	34	17,013	19,287	21,560	23,834	26,107	34,761	119,468	198,491	271,831	339,487
Trades	340	323	306	288	271	30,307	32,530	34,753	36,977	39,200	4,822,859	5,295,734	5,691,905	6,011,373	6,254,138
Arts and Humanities	937	901	865	829	793	27,132	28,970	30,808	32,646	34,484	10,316,407	11,575,985	12,703,234	13,698,156	14,560,749
Business and Com	264	251	239	226	213	24,184	25,612	27,040	28,468	29,895	2,128,389	2,384,345	2,603,891	2,787,026	2,933,751
Health	1,121	1,092	1,064	1,035	1006	46,164	47,617	49,069	50,522	51,975	33,676,903	34,399,922	35,039,411	35,595,369	36,067,796
Soc and Beh Sciences	109	106	102	99	95	20,963	21,791	22,619	23,448	24,276	527,652	598,093	662,737	721,582	774,630
STEM	161	158	154	151	147	35,000	36,916	38,833	40,749	42,665	3,039,345	3,275,094	3,497,429	3,706,350	3,901,856
Trades	159	154	150	145	140	34,478	37,410	40,342	43,275	46,207	2,918,528	3,283,674	3,620,962	3,930,391	4,211,962

Employed Over the Five Year Period

Median Earnings Over Five Years

Total Personal Earnings Above a High School Wage ($16,122)

Total Additional Earnings Generated Over the Five Years = **$438,756,988**

Making the Case for the Graduating Cohort of 2005-06

Total Additional Earnings Over Last Five Years = **$438,756,988**

Additional State Tax Revenues Generated = **$68,536,366**

Income Tax	$37,818,493
Property Tax	$8,471,451
Sales Tax	$22,246,422

Savings to the State = **$25,707,910**

Medicaid	$20,078,941
Corrections	$5,628,969

Total Revenues and Savings to the State = **$94,244,276**