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Trends and Comparisons in Higher Education Economics: How has Kentucky Fared?

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Trends and Comparisons in Higher Education Economics: How has Kentucky Fared?

William Hoyt, Acting Director
Center for Business & Economic
Research

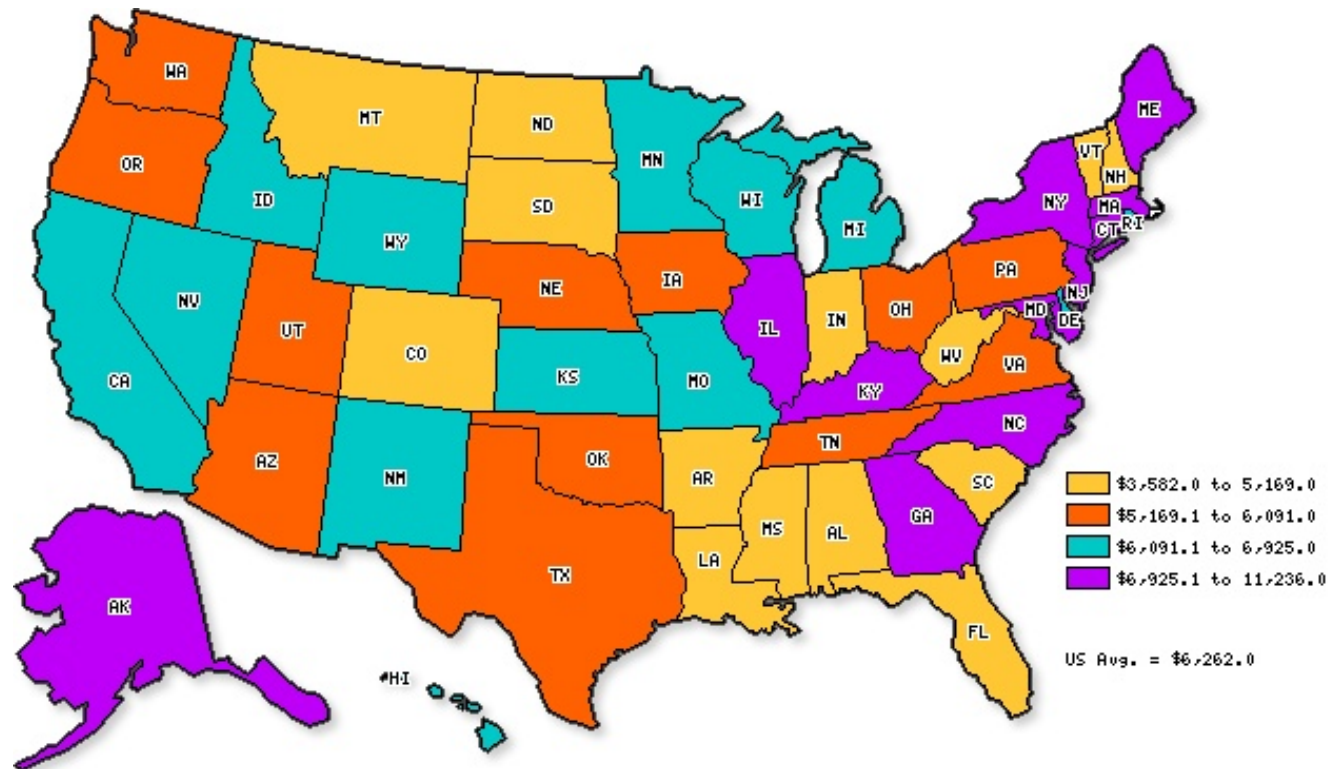
“Economics of Higher Education”

- Issues to consider:
 - Financing Education
 - State versus Individual (Family & Student) contributions
 - Returns to Education
 - Participation and Access
 - Completion

Financing Education

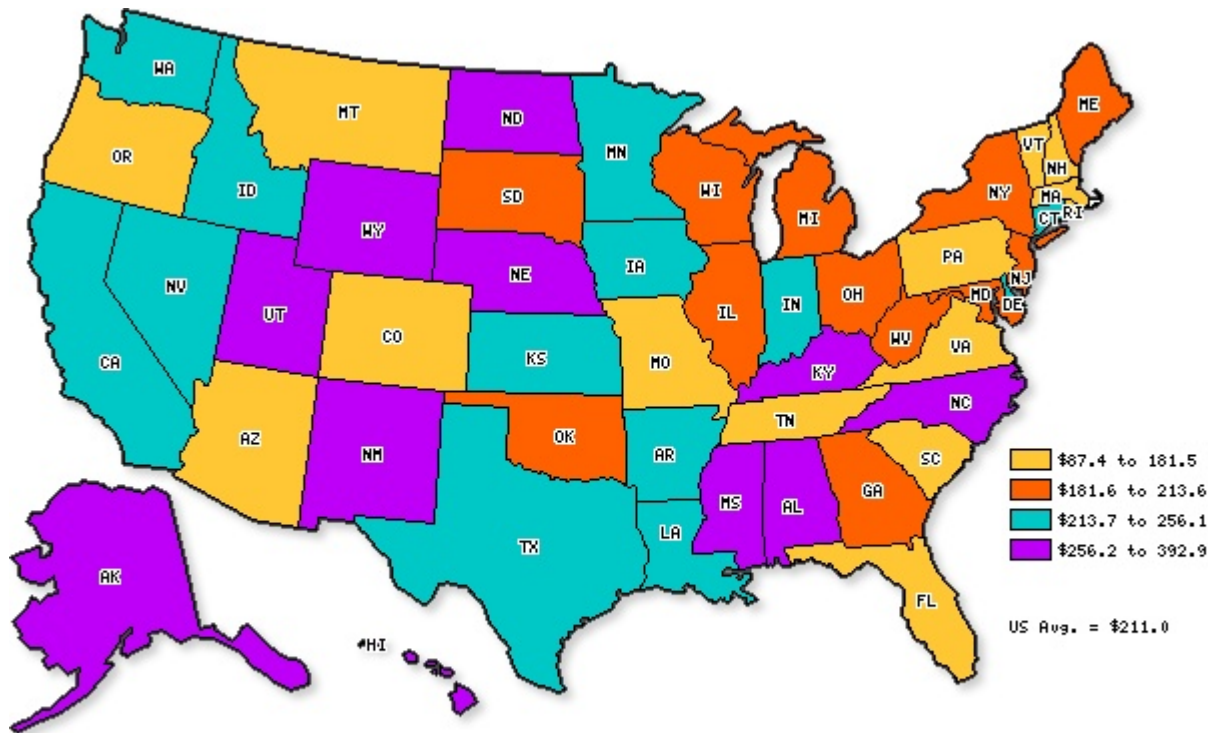
- State Support
 - Kentucky has relatively high state support for public higher education
 - High State Spending per Student
 - Higher State Spending per Capita
 - 2nd highest percentage increase in state and local appropriations 1990-2002, Highest per student
- Students and Family Support
 - Relatively Low Tuition (20th)
 - Very low student borrowing and debt
 - High cost for Lowest Income Households

Higher Education Assistance Per Student, 2002



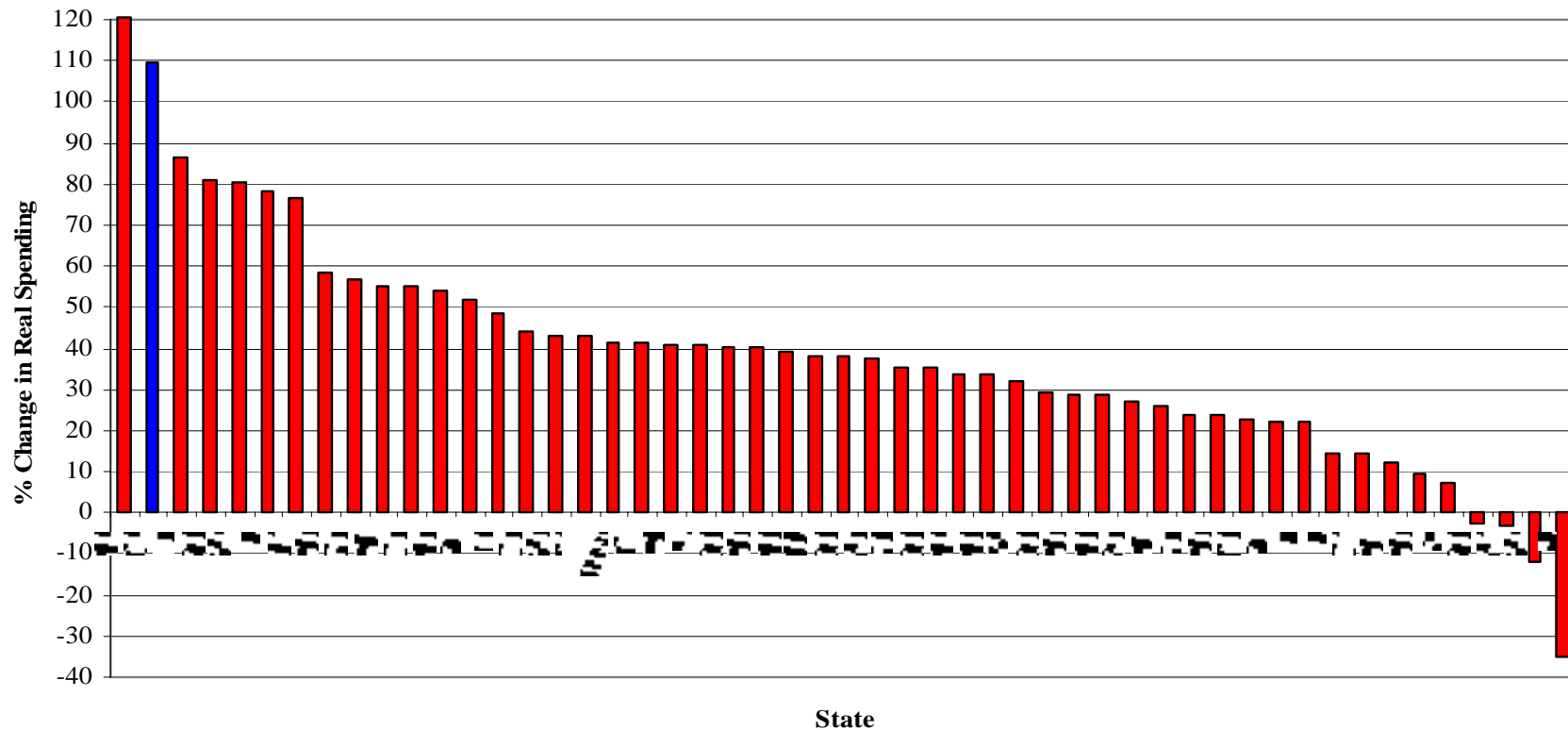
Sources: State Higher Education Executive Officers (SHEEO)

Appropriation of State Tax Funds for Higher Education Per Capita - 2004



Source: Jim Palmer, Grapevine

State and Local Appropriations for Higher Education % Change (Real), 1990-2002



State and Local Appropriations for Higher Education

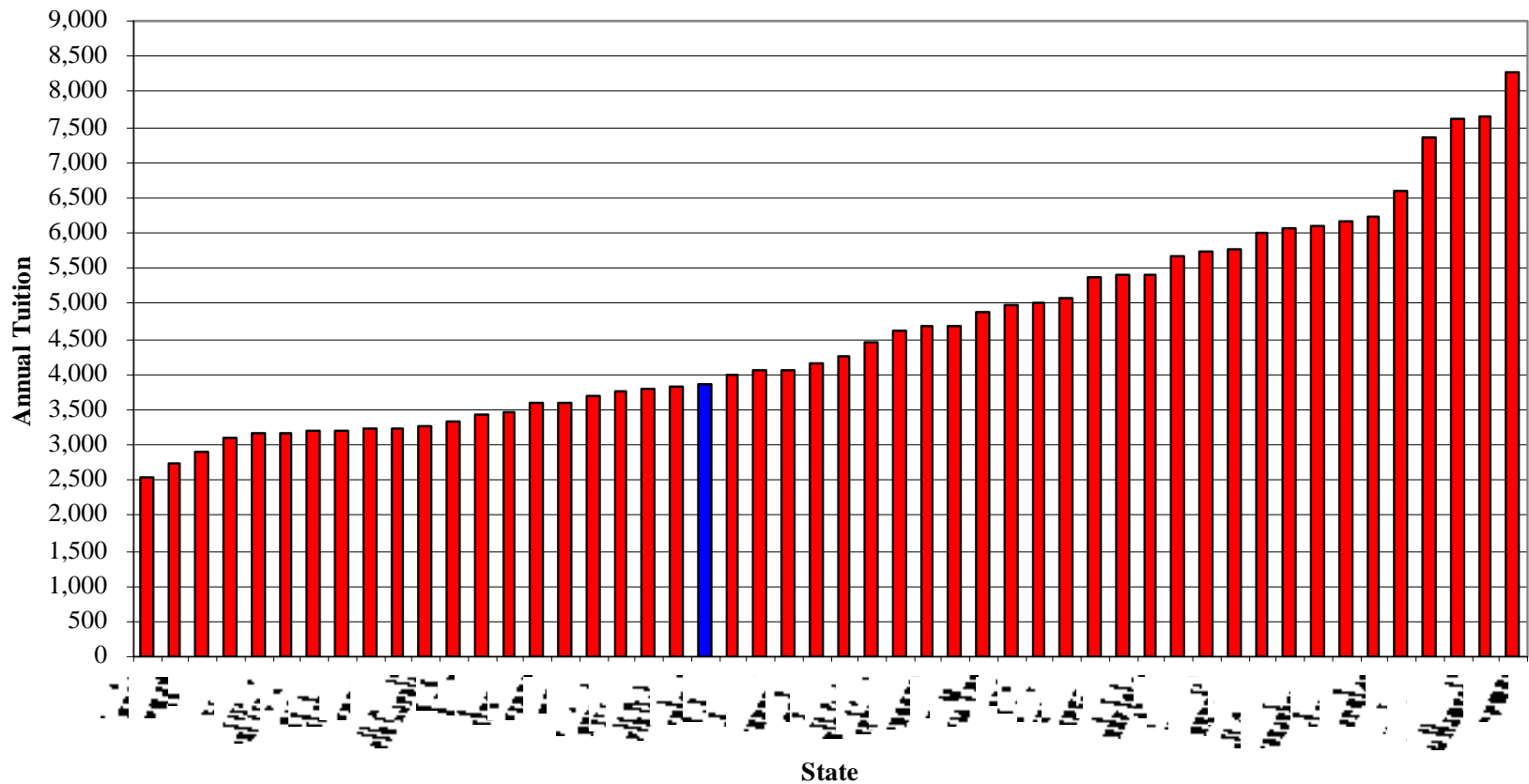
% Change (Real), 1990-2002

State	% Change, 1990 - 2002	% Change, Real 1990-2002	% Change in Enrollment	% Change, Funding per
NV	148.9	120.7	77.9	9.3
KY	137.9	109.7	21.3	53.2
LA	114.7	86.5	43.0	17.3
AR	109.2	80.9	52.7	7.0
WV	108.4	80.2	10.3	47.7
ID	106.7	78.5	39.3	16.0
UT	104.6	76.4	62.3	-1.5
MD	86.9	58.6	12.6	29.6
GA	85.1	56.8	15.1	25.6
MS	83.6	55.3	33.2	7.7
CA	83.2	55.0	17.6	21.7
NC	82.4	54.1	34.5	5.9
AZ	80.0	51.7	28.5	9.4
IL	76.9	48.7	-5.2	45.8
CO	72.1	43.9	15.7	16.3
WA	71.3	43.1	42.7	-6.2
TX	71.2	43.0	19.9	11.6
Average	69.5	41.2	15.1	15.0
KS	69.4	41.1	1.6	30.2
MI	68.9	40.6	7.1	23.2

Comparisons of Public Salaries, 2002

A. Inflation Adjusted								
	4-year institutions						2-year	
	Total		University		Other 4-year			
Kentucky	55,421	8	63,532	7	50,914	8	44,045	6
United States	61,957	3	67,992	2	58,007	2	51,576	2
Illinois	61,386	4	67,565	3	56,247	4	57,632	1
Indiana	59,744	5	63,344	8	52,658	7	39,868	8
Missouri	56,748	6	67,231	4	54,650	5	46,492	5
Ohio	64,029	2	65,971	5	56,861	3	51,318	3
Tennessee	55,590	7	64,510	6	52,713	6	39,579	9
Virginia	64,382	1	70,233	1	60,810	1	47,050	4
West Virginia	50,326	9	58,917	9	46,415	9	42,212	7

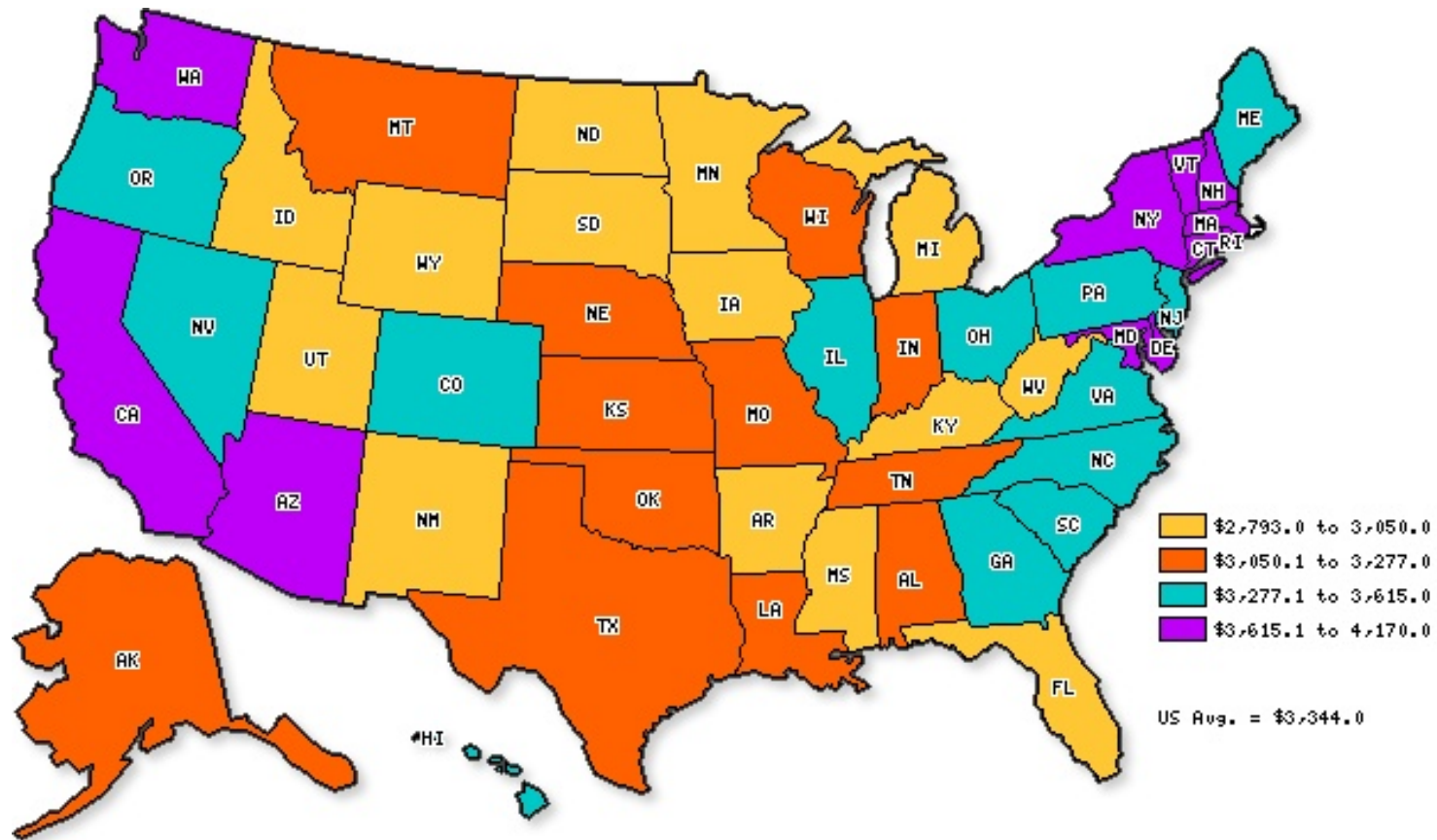
Average Tuition 4-Year Public, 2004



Tuition, 2004 & Change, 2000-2004

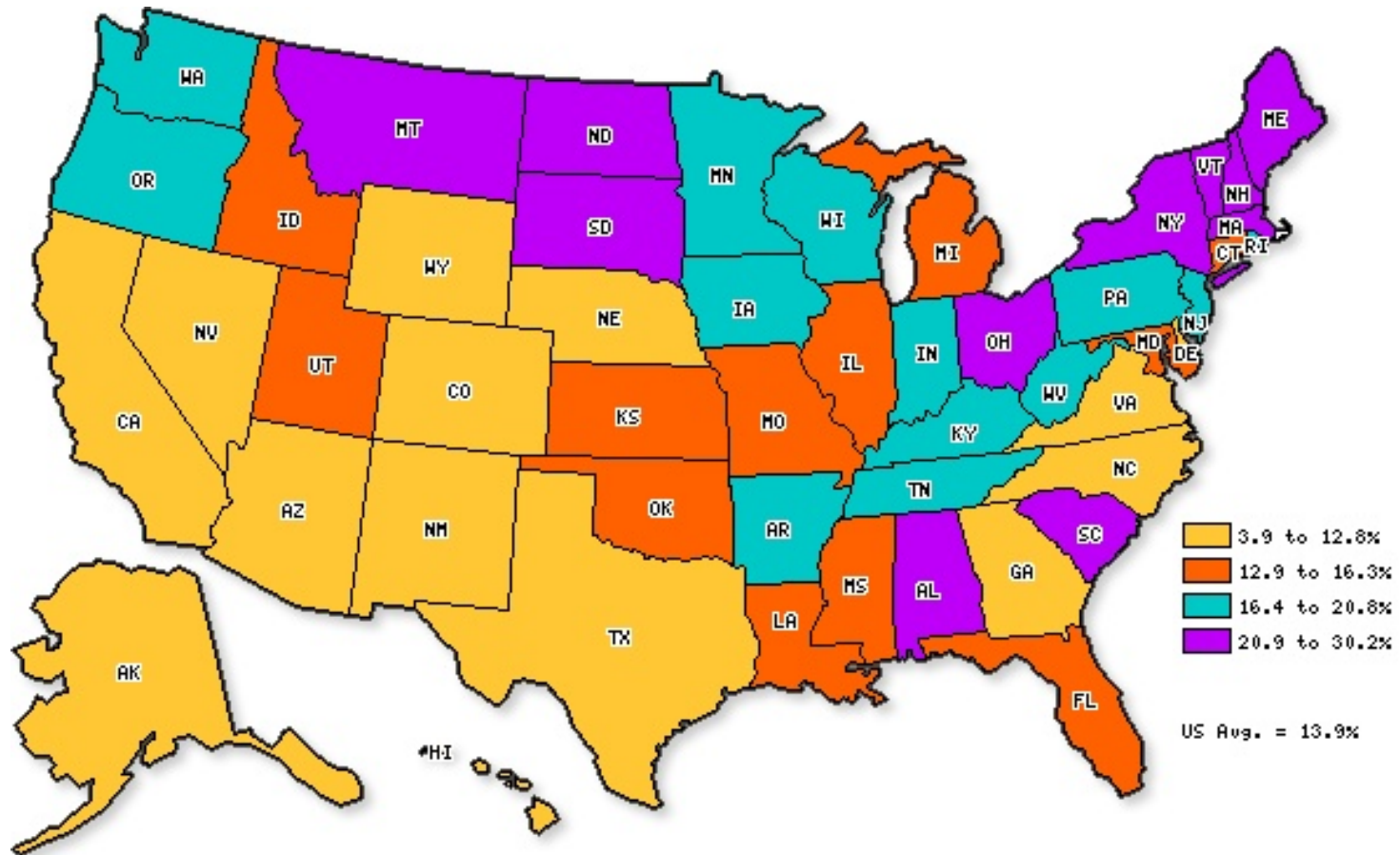
STATE NAME	Tuition, 2004	Rank	Change, \$	Change, % Annu	Rank of Change
Kentucky	3869	30	\$1,542	13.6	7
Alabama	3978	29	\$1,490	12.4	12
Alaska	3425	38	\$814	7.0	45
Arizona	3586	36	\$1,528	14.9	5
Arkansas	4041	28	\$1,589	13.3	8
California	3797	32	\$1,085	8.8	36
Colorado	3453	37	\$833	7.1	44
Connecticut	5767	11	\$1,497	7.8	39
Delaware	6177	7	\$1,860	9.4	34
Florida	2553	50	\$642	7.5	42
Georgia	3223	42	\$867	8.1	38
Hawaii	3242	41	\$454	3.8	50
Idaho	3323	39	\$1,121	10.8	26
Illinois	5662	13	\$1,960	11.2	21
Indiana	5394	15	\$2,052	12.7	10
Iowa	4991	19	\$2,230	16.0	1
Kansas	3688	34	\$1,374	12.4	14
Louisiana	3190	44	\$912	8.8	35
Maine	5019	18	\$1,141	6.7	46
Maryland	6242	6	\$2,105	10.8	27

Average Loan Amount Students Borrow Each Year , 2003



Source: Measuring Up: The State-by-State Report Card for Higher Education

Share of Income Poorest Families Need to Pay for Tuition at Lowest Priced Colleges, 2003



Source: Measuring Up: The State-by-State Report Card for Higher Education

Ability to Pay, Kentucky

A CLOSER LOOK AT FAMILY ABILITY TO PAY	Average family income	Community colleges		Public 4-year colleges/universities		Private 4-year colleges/universities	
		Net college cost*	Percent of income needed to pay net college cost	Net college cost*	Percent of income needed to pay net college cost	Net college cost*	Percent of income needed to pay net college cost
Income groups used to calculate 2004 family ability to pay							
20% of the population with the lowest income	\$11,268	\$5,433	48%	\$5,666	50%	\$14,256	127%
20% of the population with lower-middle income	\$25,000	\$6,072	24%	\$6,300	25%	\$14,572	58%
20% of the population with middle income	\$40,825	\$6,456	16%	\$6,939	17%	\$14,543	36%
20% of the population with upper-middle income	\$62,328	\$6,587	11%	\$7,402	12%	\$14,720	24%
20% of the population with the highest income	\$110,000	\$6,629	6%	\$7,511	7%	\$16,095	15%
40% of the population with the lowest income	\$18,134	\$5,752	32%	\$5,983	33%	\$14,414	79%

*Net college cost equals tuition, room, and board, minus financial aid.

Education, Earnings, and Income

- Significant Gross Differences in Earnings between High School Graduates, BA, and Associate
- Associate
 - 3,400 (KY), 2,500 (US) 22-29 years
 - 8,000 (KY), 7,000 (US) 30 – 64 years
- BA
 - 7,400 (KY), 9,000 (US), 22-29 years
 - 16,000 (KY), 16,000 (US), 30-64 years

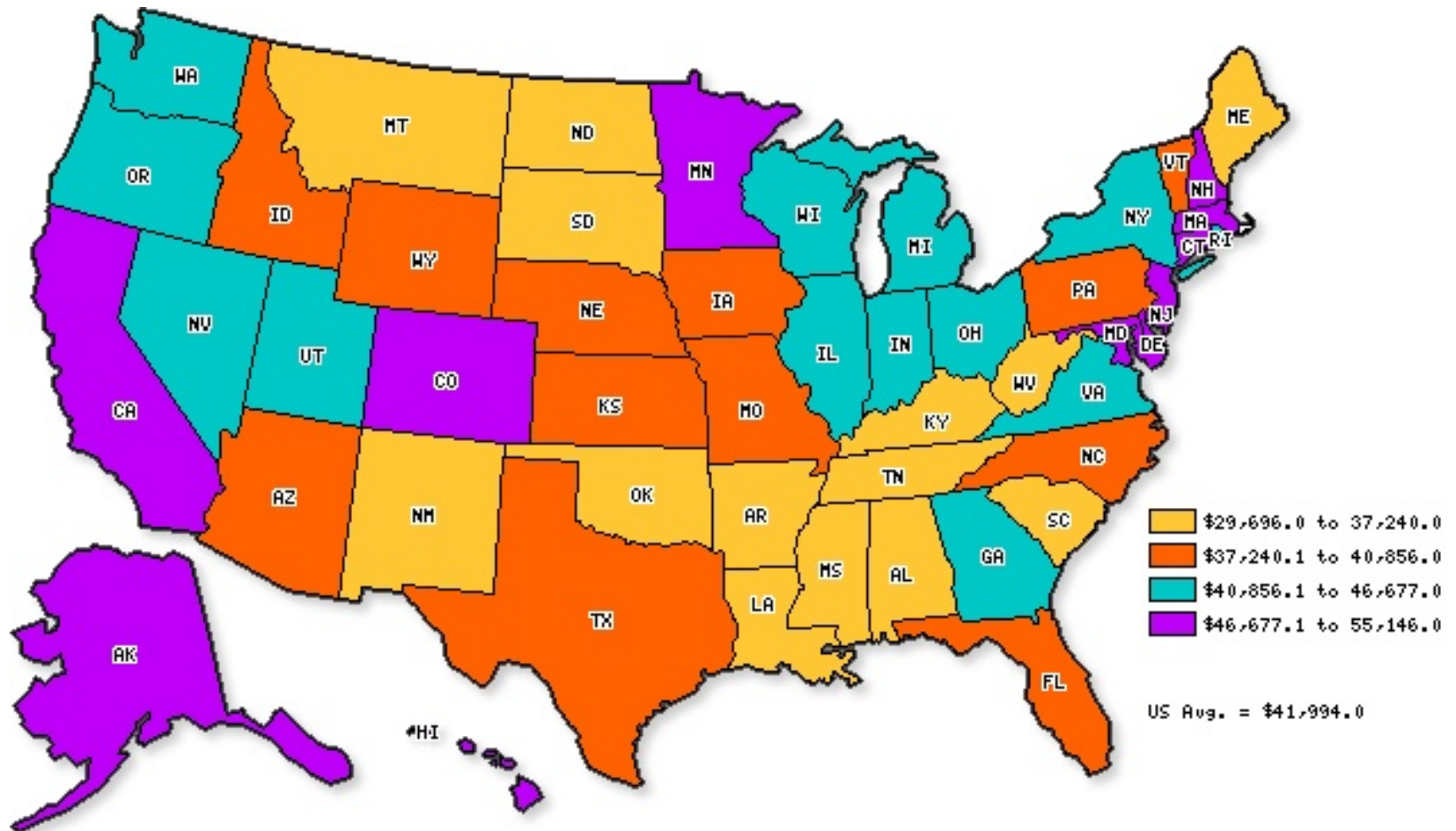
Education, Earnings, and Income (2)

- Significant Differences in Earnings between High School Graduates, BA, and Associate when controlling for characteristics
- Much greater for female
- Some College
 - 12-13%, Male
 - 40%, Female
- BA
 - 50%, Male
 - 100%, Female
- Graduate
 - 100%, Male
 - 200%, Female

Education, Earnings, and Income (3)

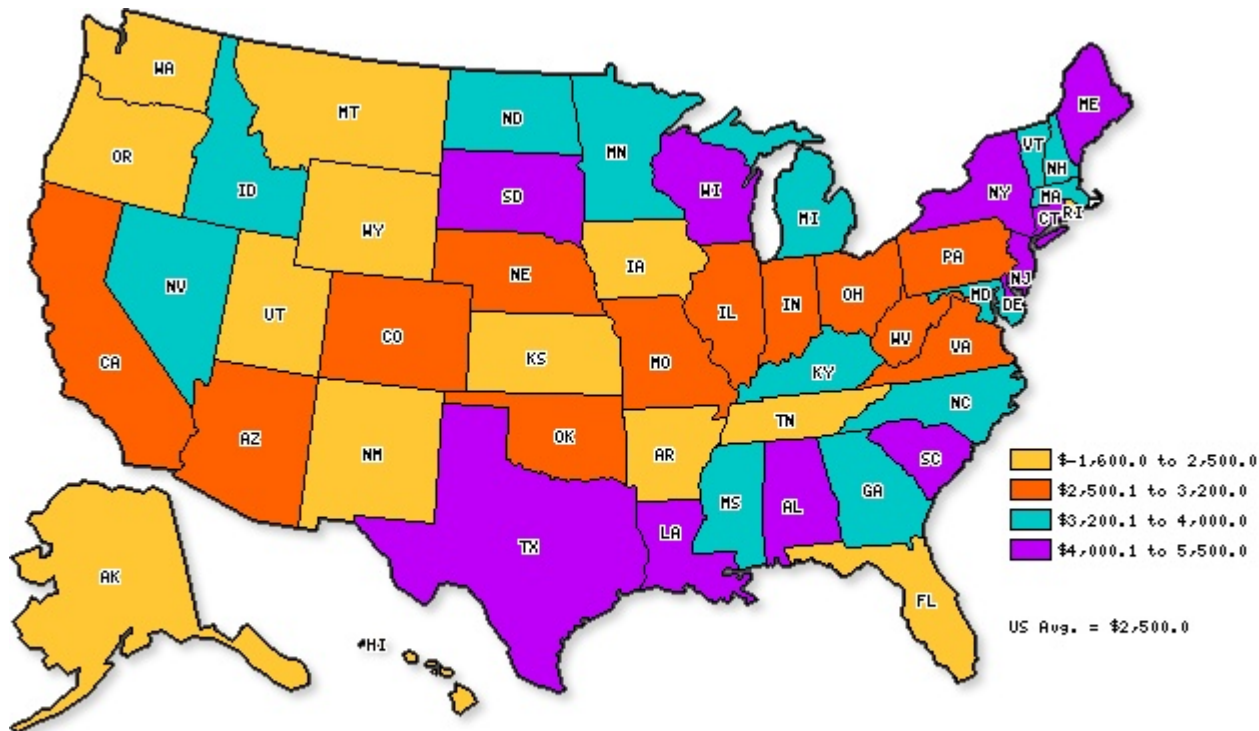
- Kentucky lags US in jobs in Office and Technology
- Lags in % college educated in all categories
- Lags in salaries in all categories

Median Household Income - 1999



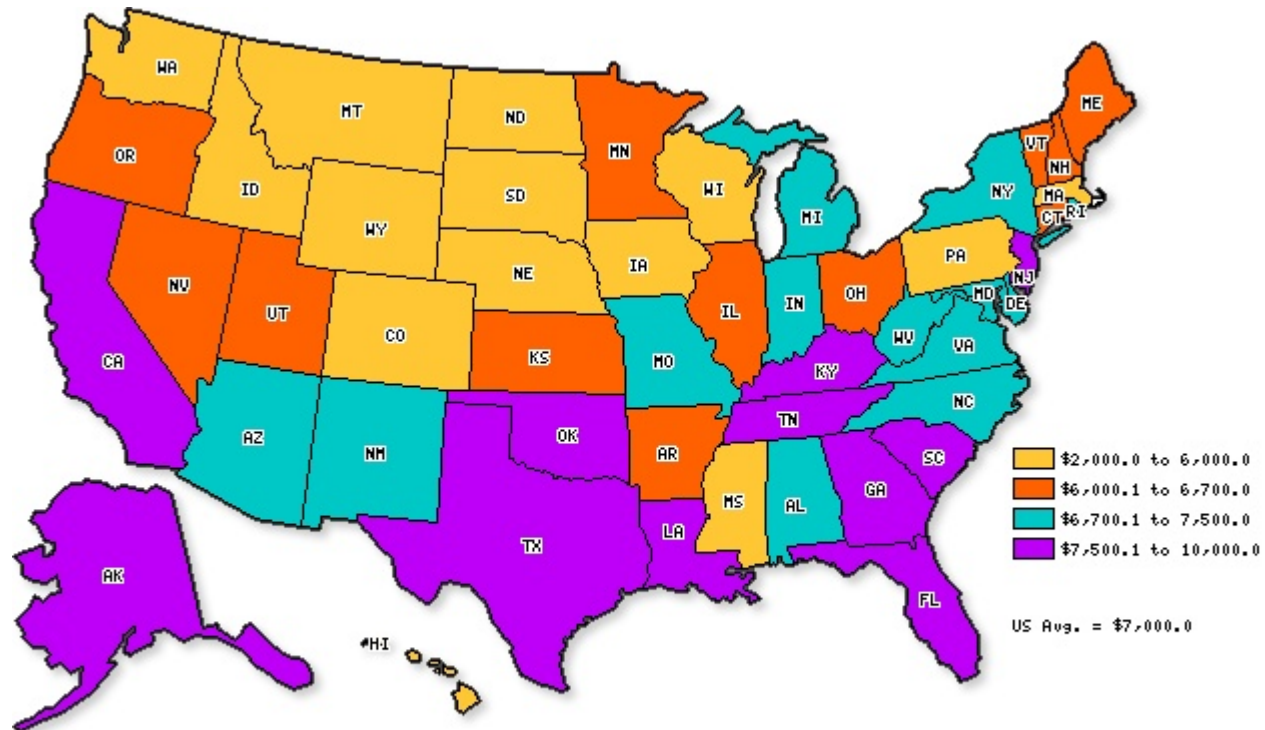
Source: US Census Bureau

Difference in Median Earnings Between a High School Diploma and an Associates Degree 22 to 29 Year Olds 1999



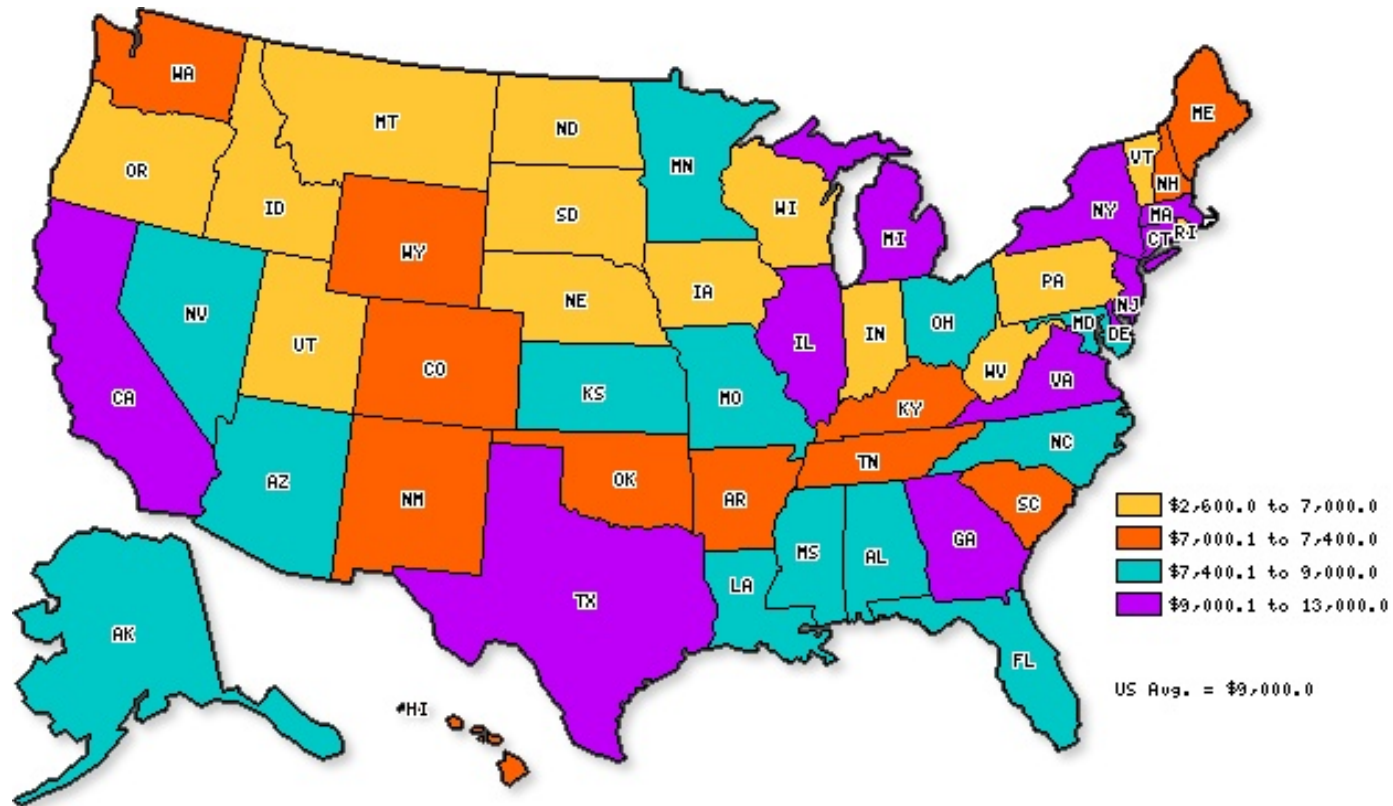
Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Difference in Median Earnings Between a High School Diploma and an Associates Degree **30 to 64 Year Olds 1999**



Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Difference in Median Earnings Between a High School Diploma and an Bachelors Degree 22 to 29 Year Olds



Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Difference in Median Earnings Between a High School Diploma and an Bachelors Degree 30 to 64 Year Olds

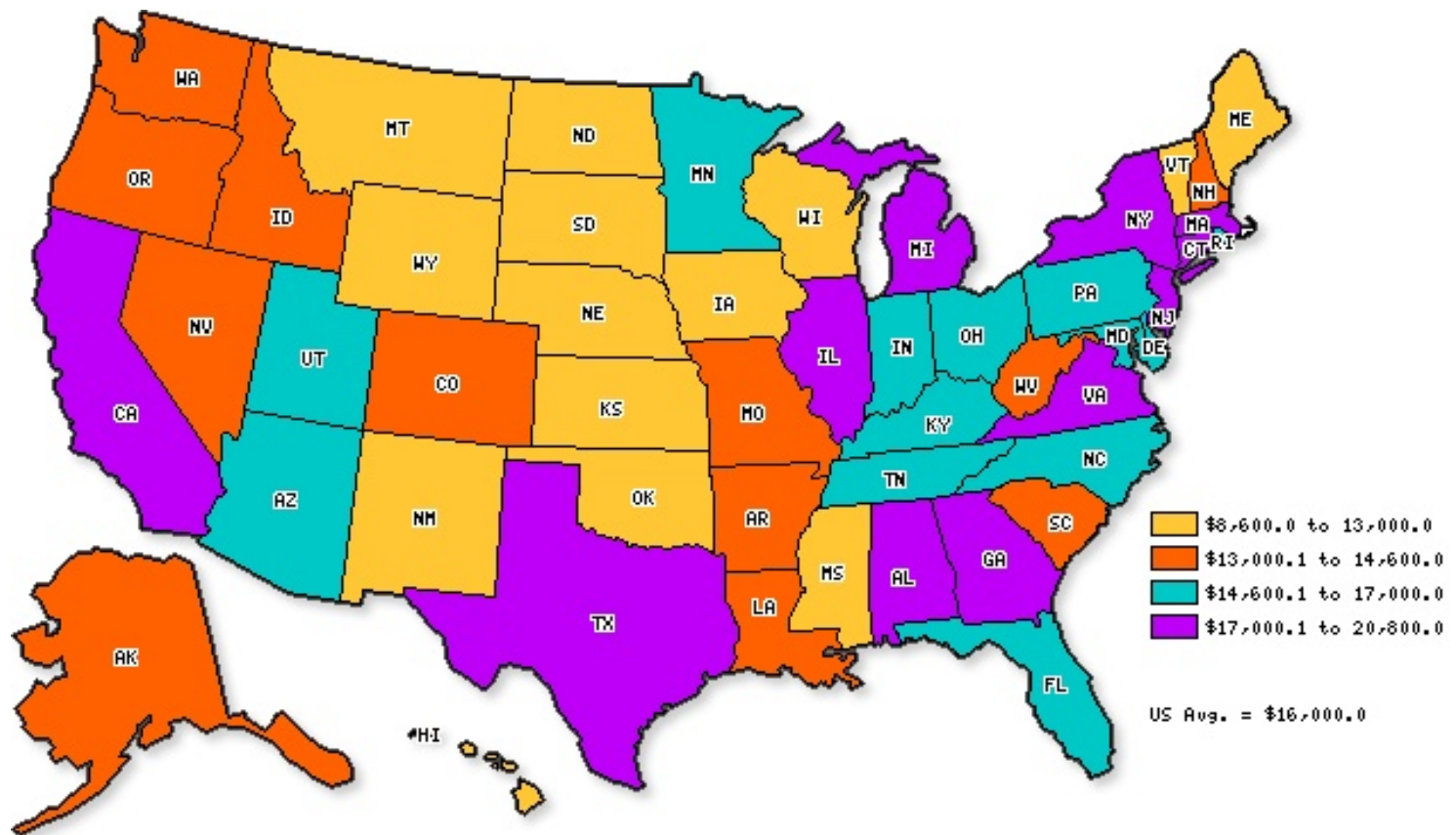


FIGURE 1

Percentage Earnings Differences between High School Graduates and Other Education Levels for Males in Kentucky

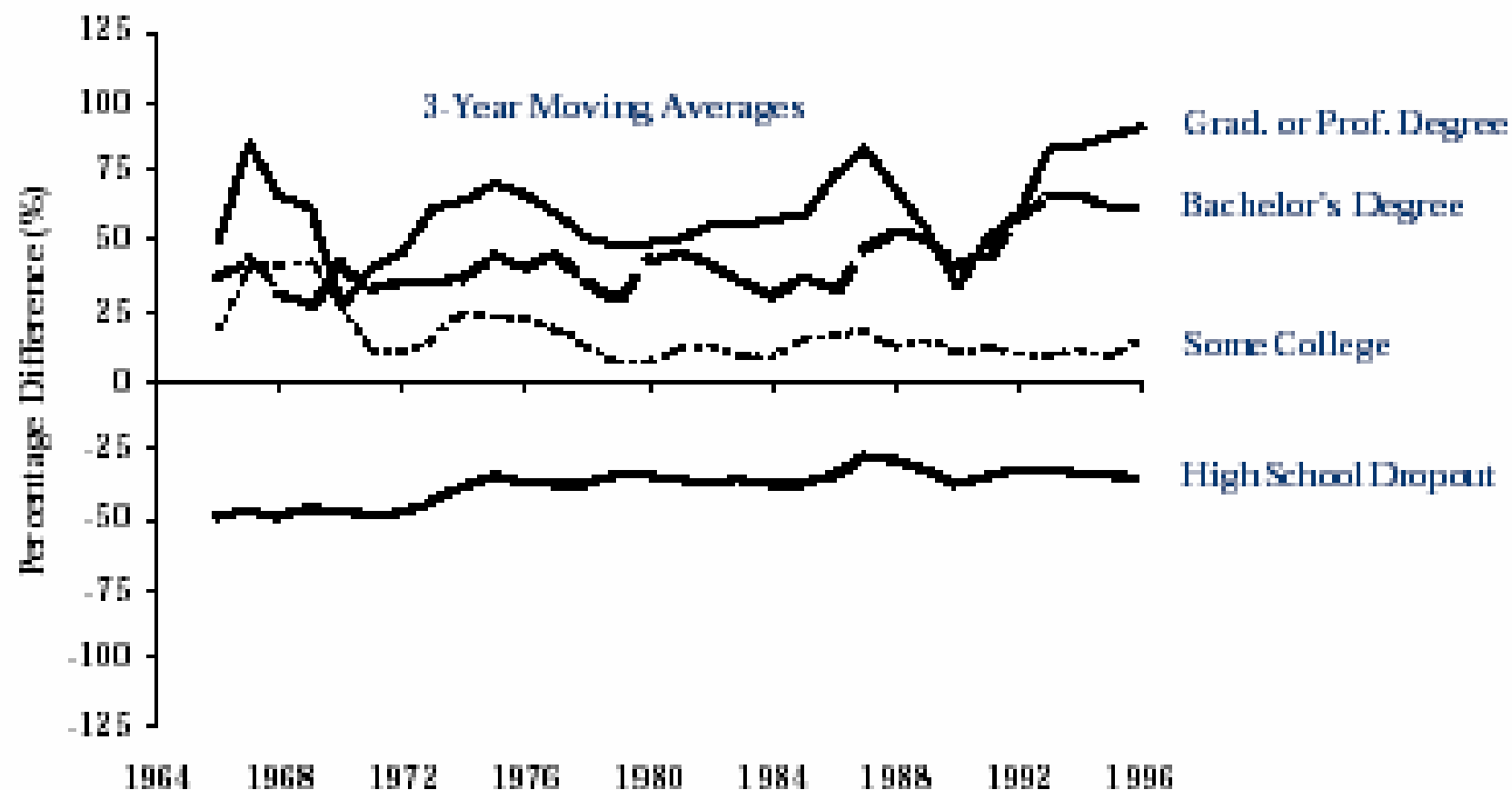


FIGURE 2

Percentage Earnings Difference between High School Graduates and Other Education Levels for Females in Kentucky

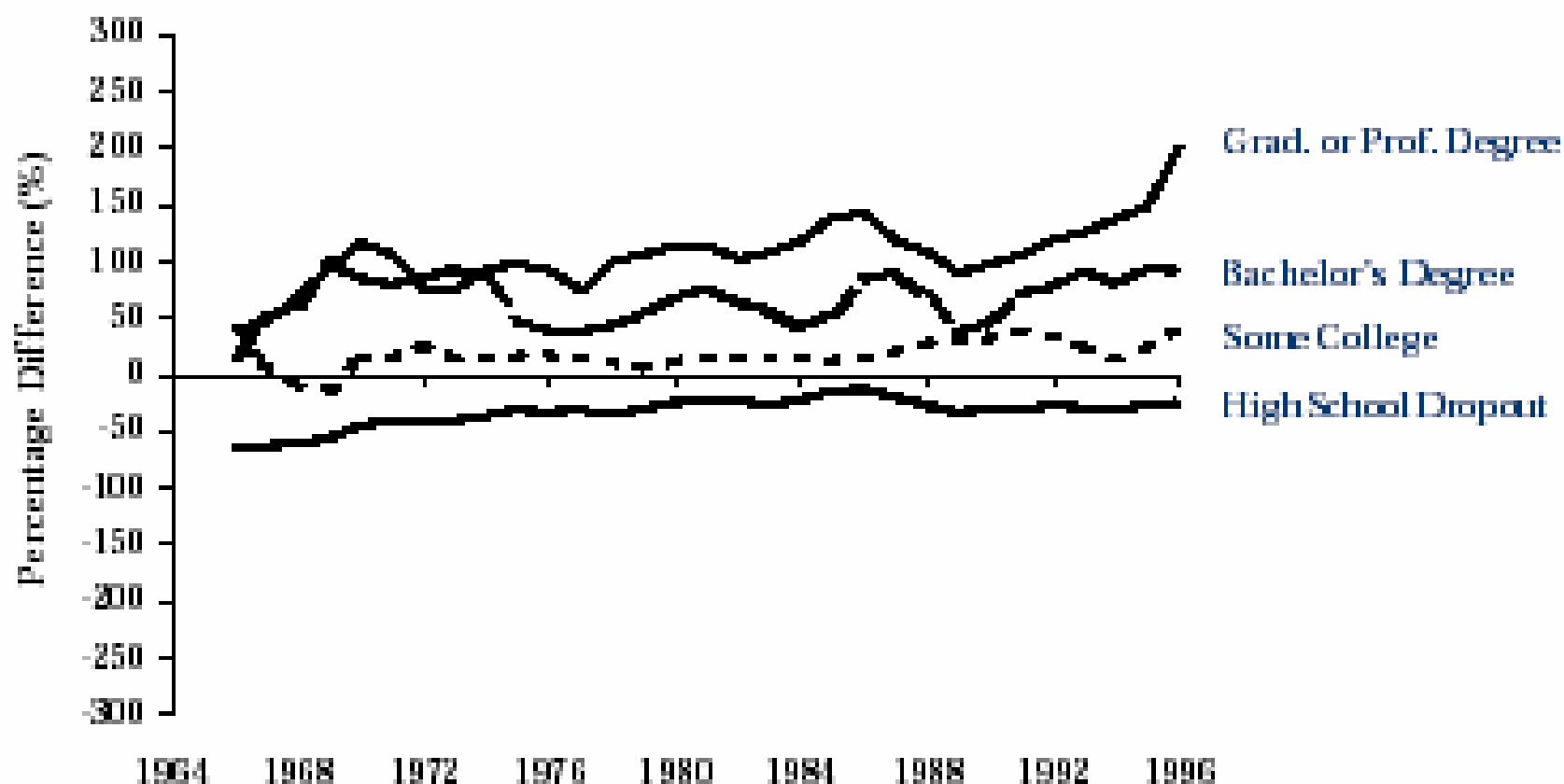


FIGURE 3

Percentage Earnings Difference between High School Graduates and Other Education Levels for Males in the United States

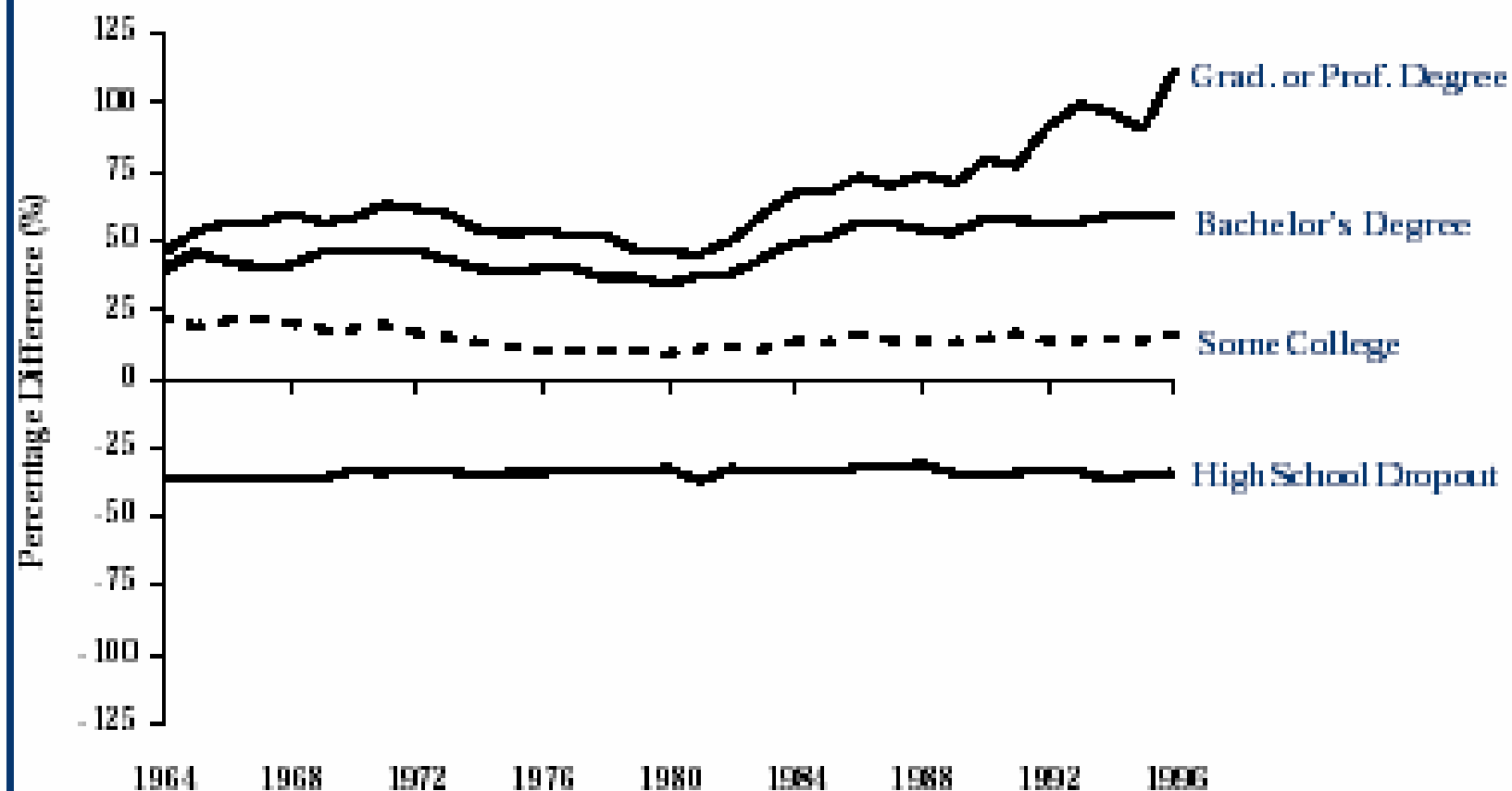
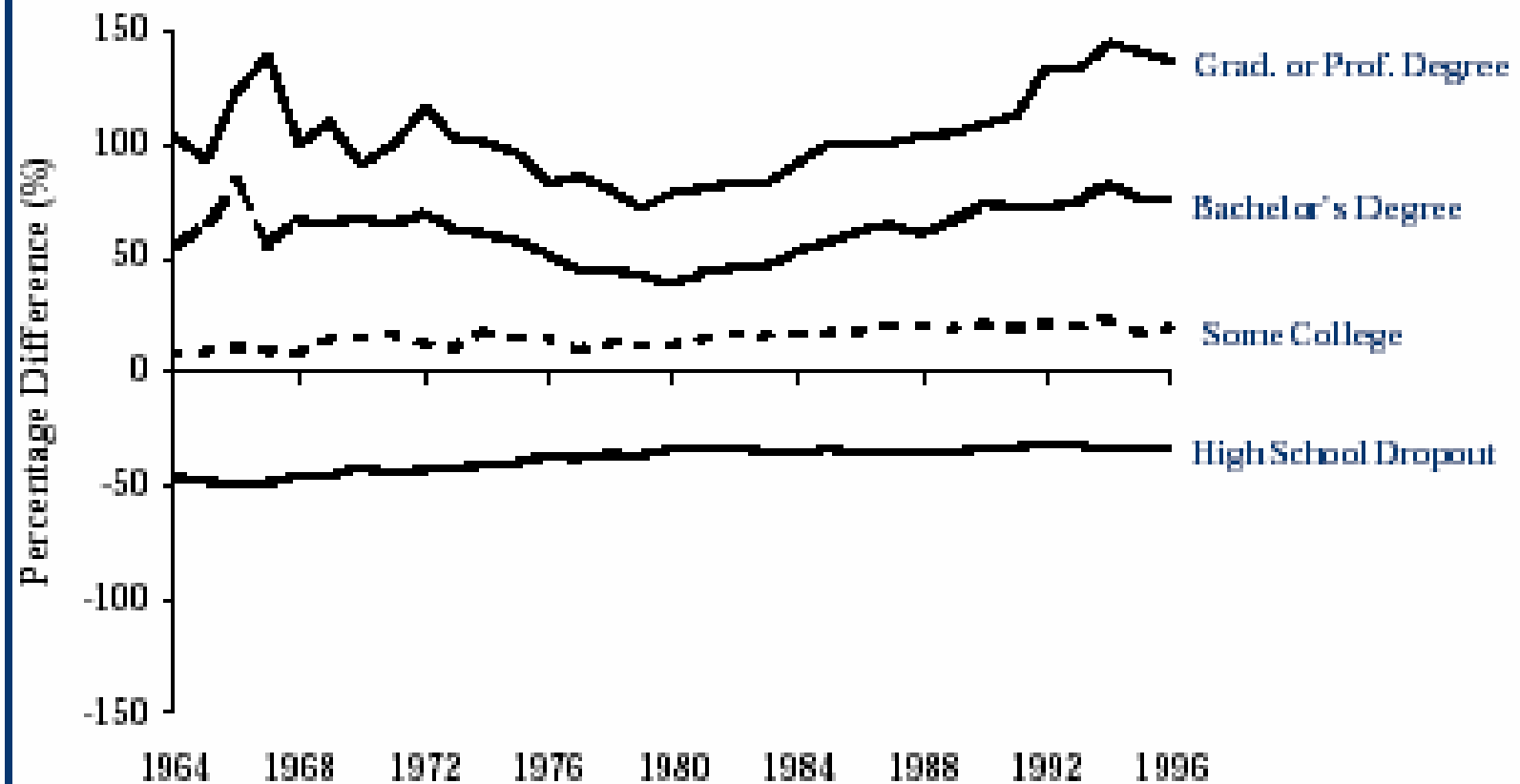


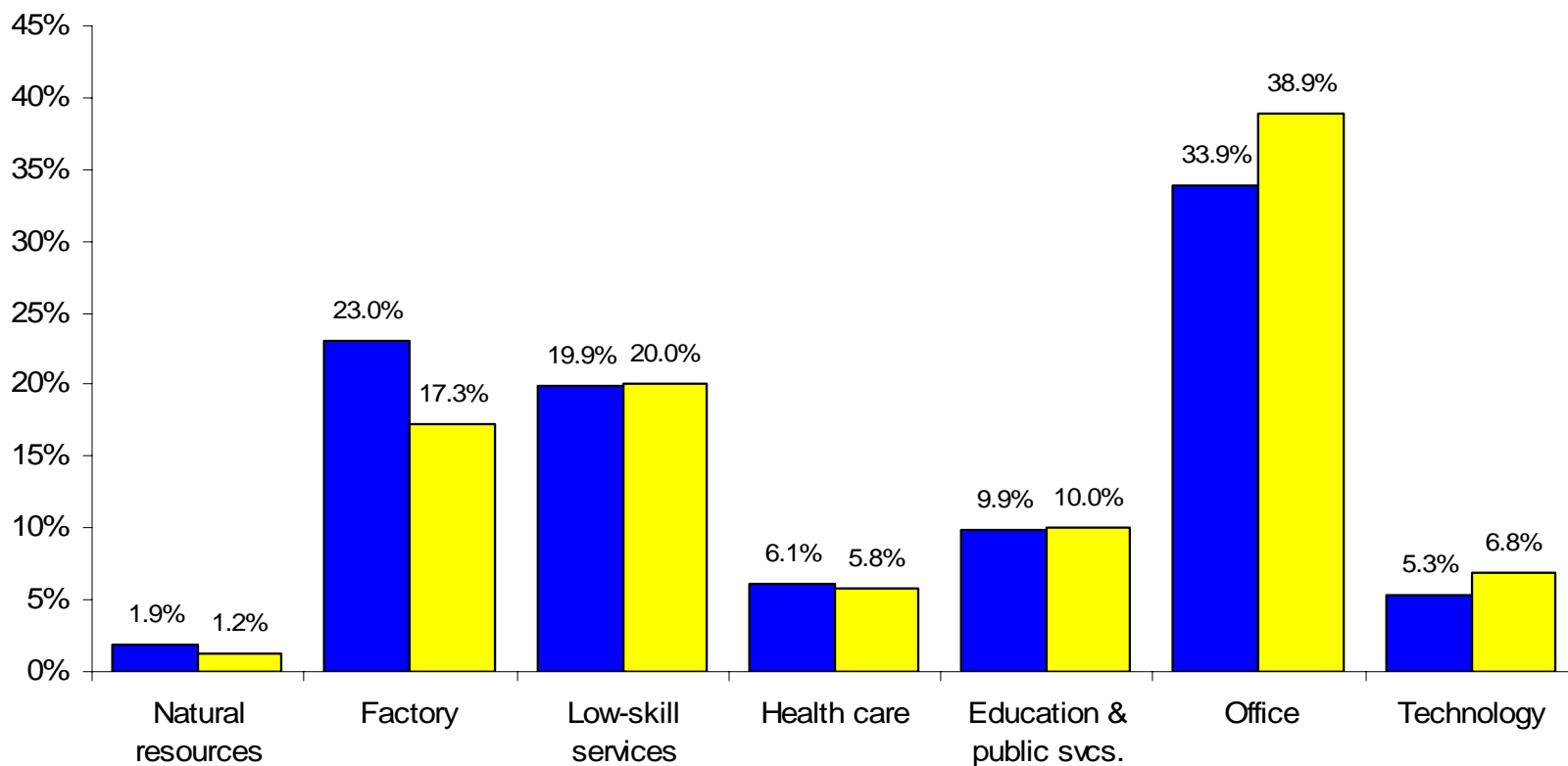
FIGURE 4

Percentage Earnings Difference between High School Graduates and Other Education Levels for Females in the United States



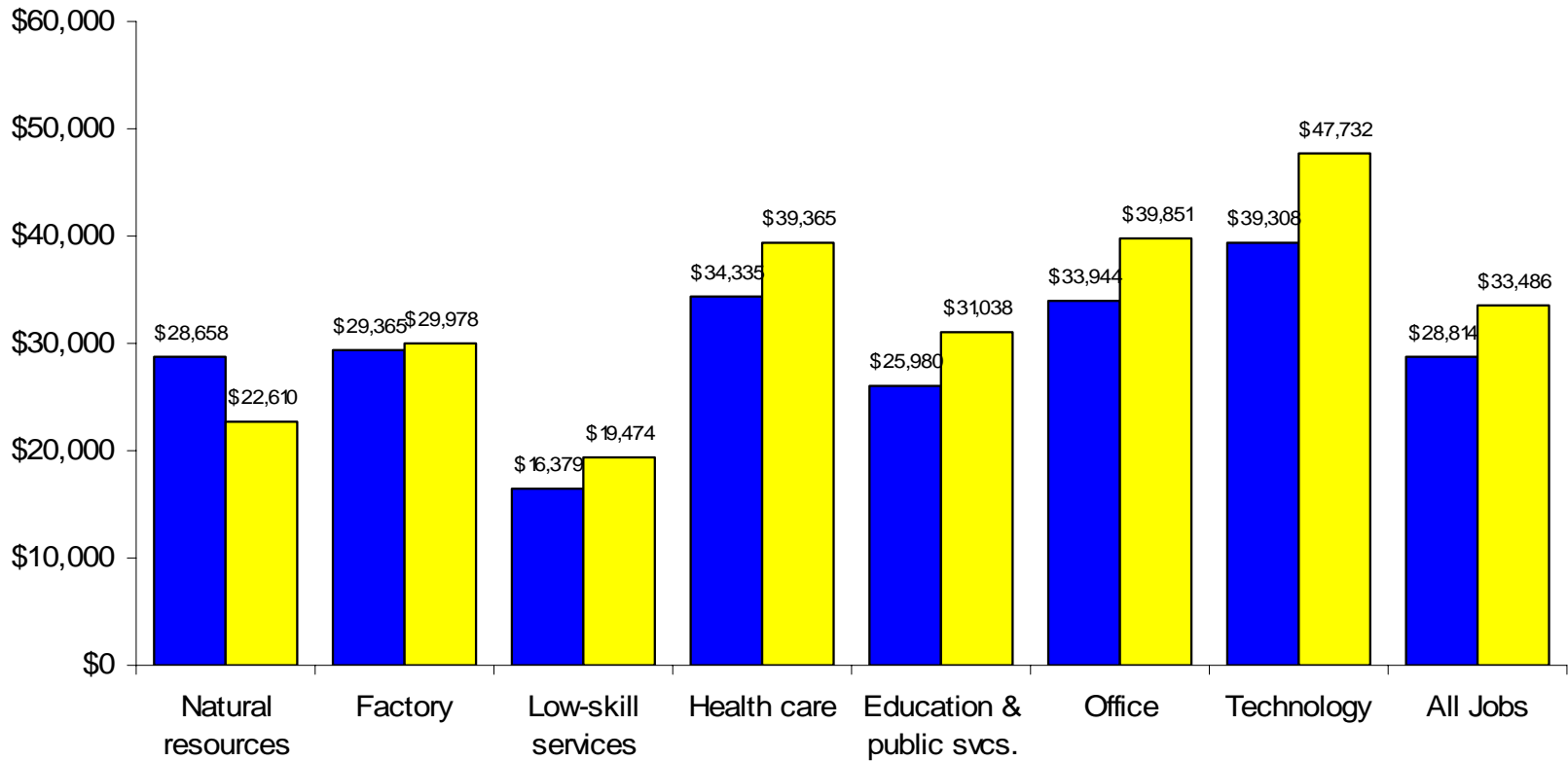
Employment by Job Type (16 & Older), 2000

■ Kentucky ■ US



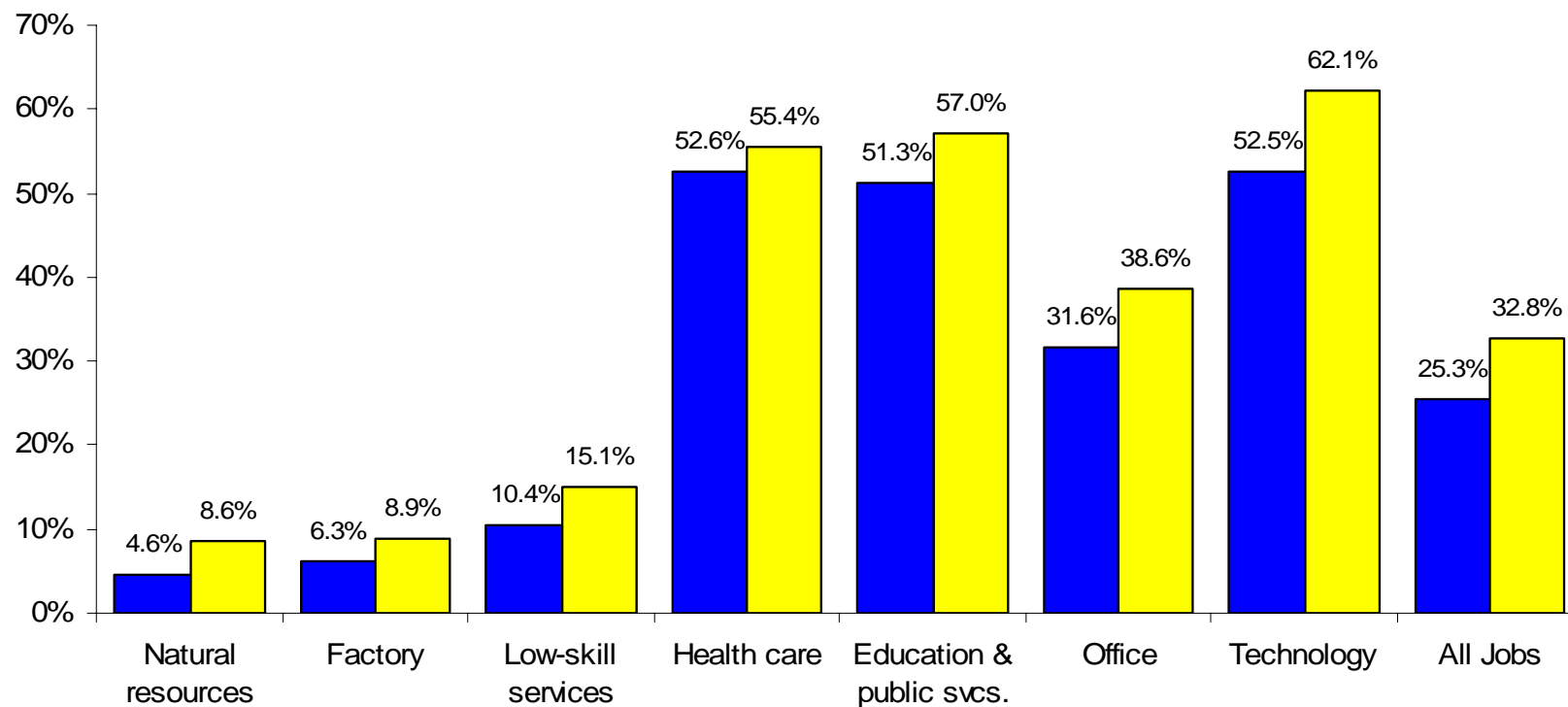
Earnings by Job Type (16 & Older), 2000

■ Kentucky ■ US



Percent of Employees with a College Degree by Job Type, 2000

■ Kentucky ■ US



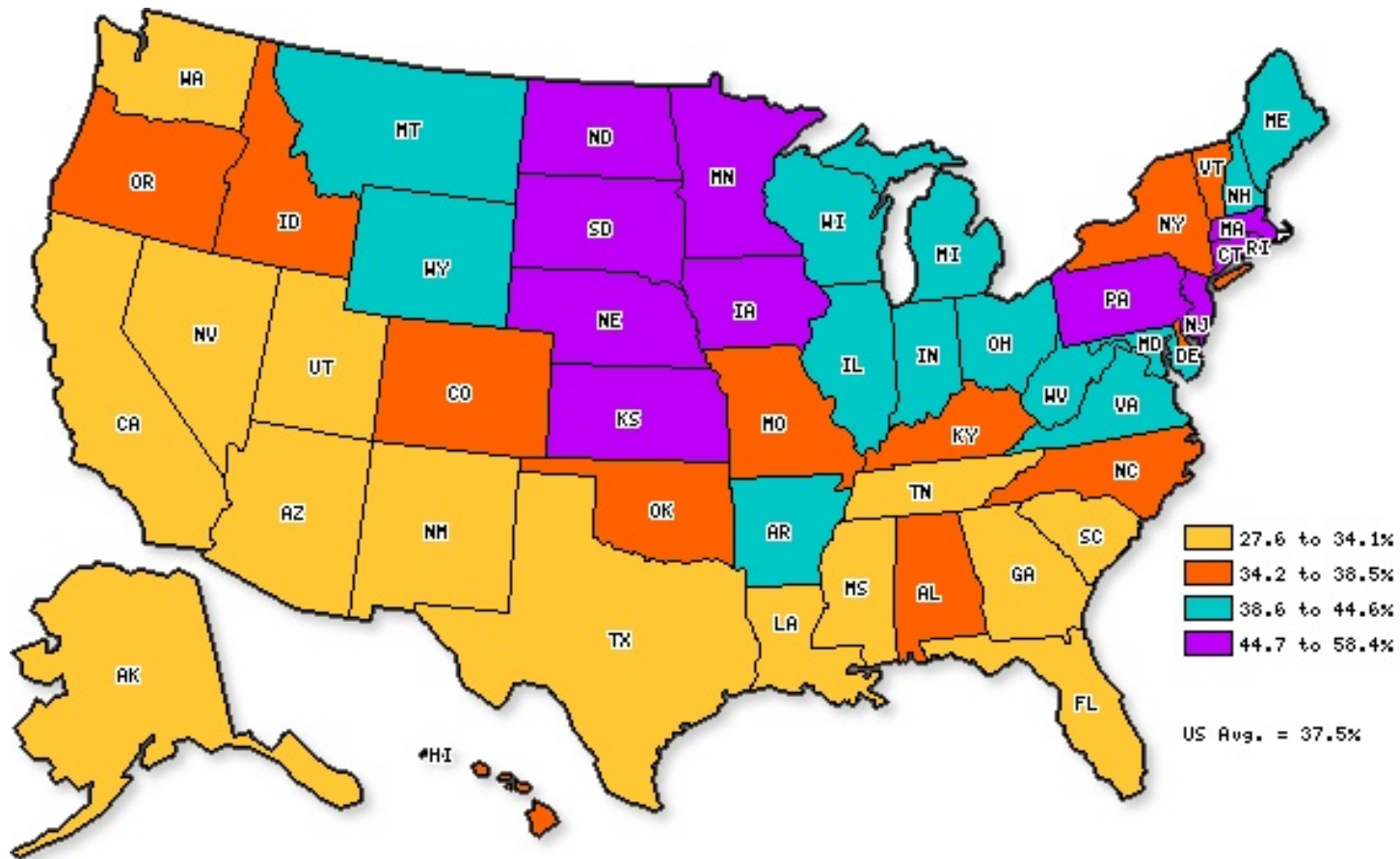
Accessibility and Participation

- Participation in Higher Education has increases in KY 1990 – 2000 but lags other states
- “Pipeline” leaks at retention (Sophomore to Graduating)

Participation

PARTICIPATION	KENTUCKY		Top States 2004
	A Decade Ago	2004	
Young Adults (60%)			
Chance for college by age 19	34%	38%	52%
18- to 24-year-olds enrolled in college	24%	32%	40%
Working-Age Adults (40%)			
25- to 49-year-olds enrolled part-time in any type of postsecondary education	3.6%	3.6%	5.4%

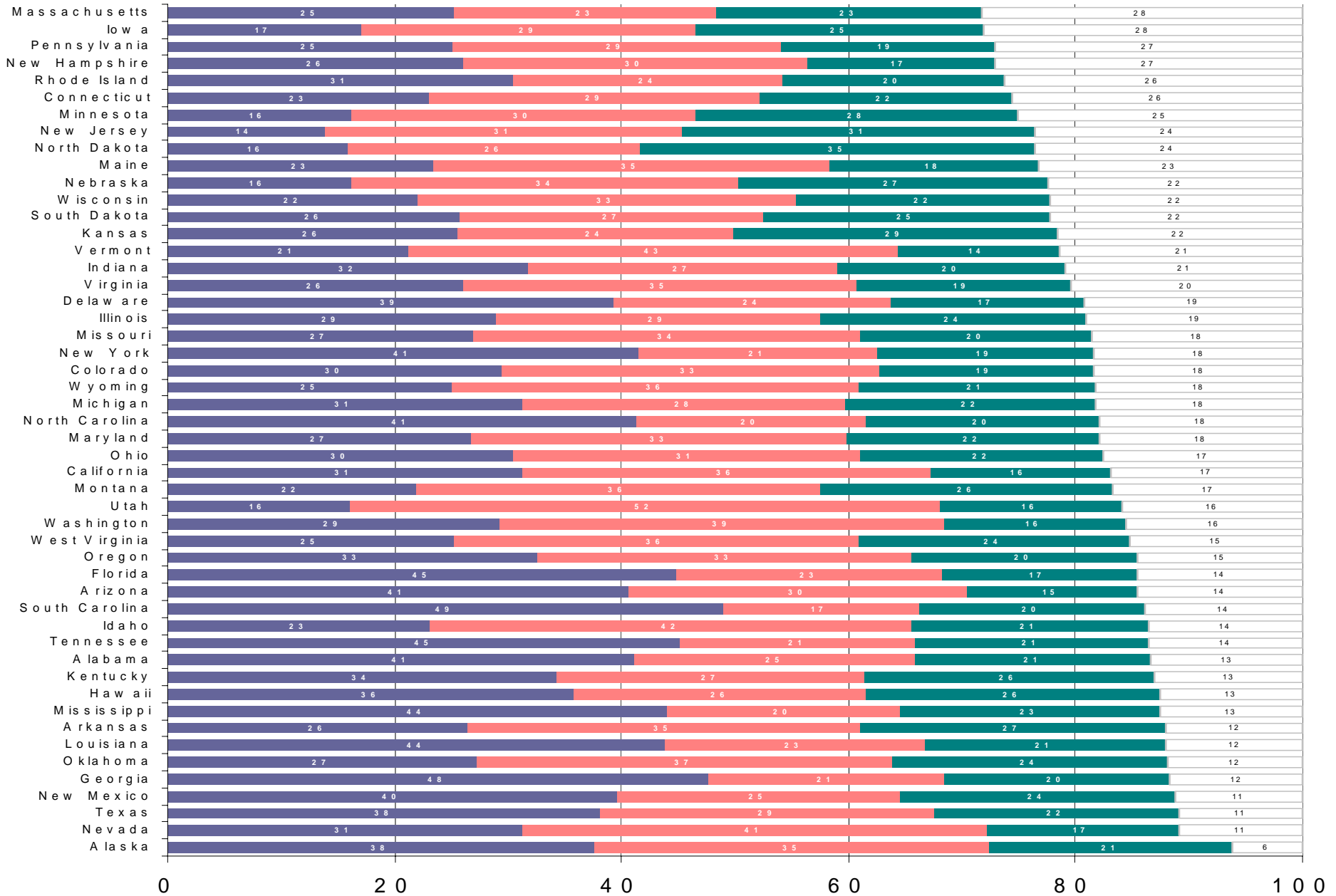
9th Graders Chance for College by Age 19



Source: Tom Mortenson, Postsecondary Opportunity

Percent Loss at Each Stage of Transition (2000)

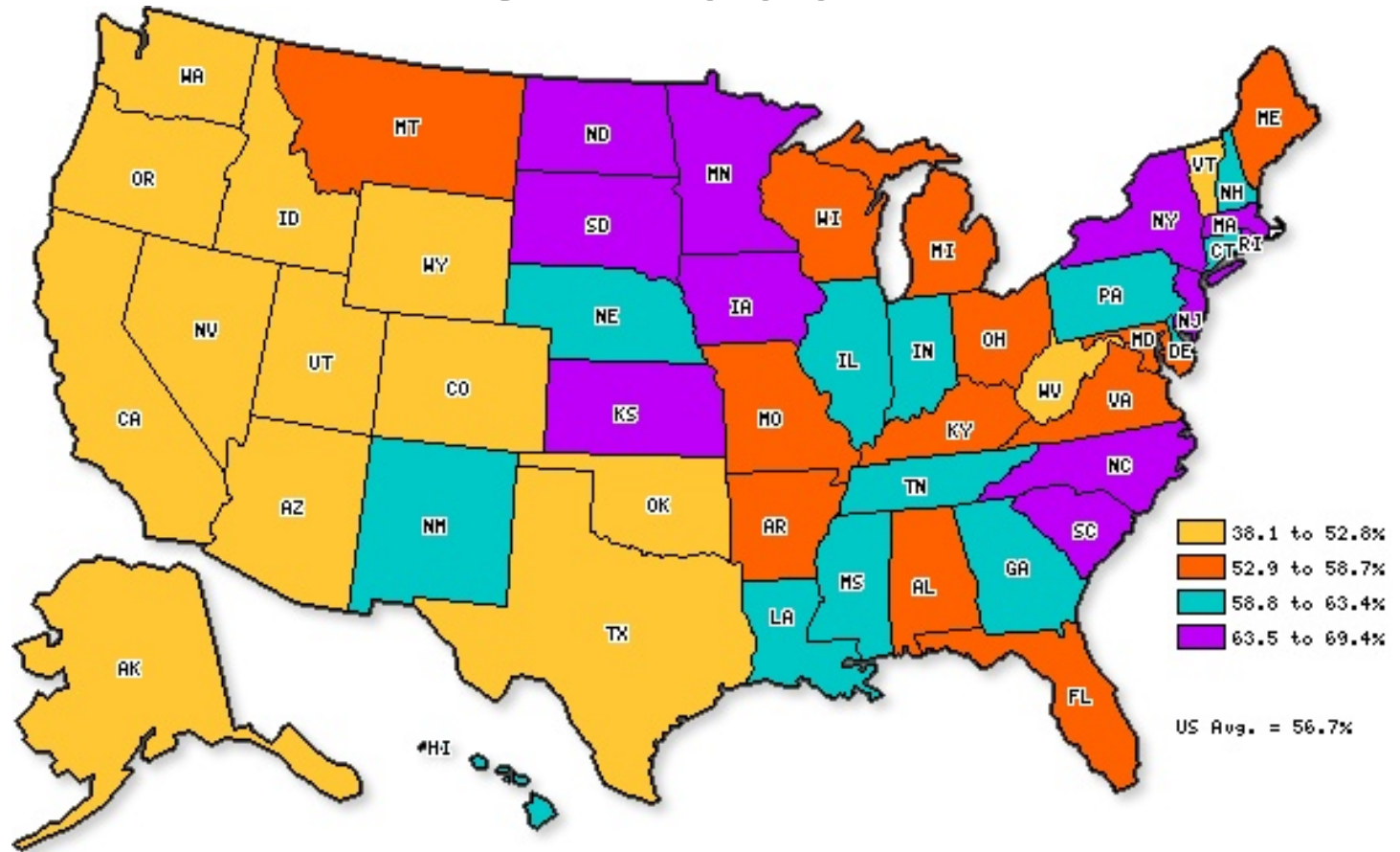
■ 9th to 12th Grade
 ■ HS Graduate to College
 ■ College Entrance to Graduation
 ■ College Graduates



“Pipeline” College Attendance and Graduation

State	For every 100 Ninth Graders	— Graduate from High School	— Enter College	— Are Still Enrolled Their Sophomore Year	— Graduate within 150% Time
Kentucky	100	66	39	25	13
United States	100	67	38	26	18
Massachusetts	100	75	52	41	28
Iowa	100	83	54	37	28
Pennsylvania	100	75	46	36	27
New Hampshire	100	74	44	34	27
Rhode Island	100	70	46	37	26
Connecticut	100	77	48	37	26
Minnesota	100	84	53	38	25
New Jersey	100	86	55	40	24
North Dakota	100	84	58	42	24
Maine	100	77	42	31	23
Nebraska	100	84	50	38	22
Wisconsin	100	78	45	33	22
South Dakota	100	74	47	31	22
Kansas	100	74	50	32	22
Vermont	100	79	36	28	21
Indiana	100	68	41	30	21
Virginia	100	74	39	30	20

College-Going Rates of High School Graduates - Directly from HS - 2000

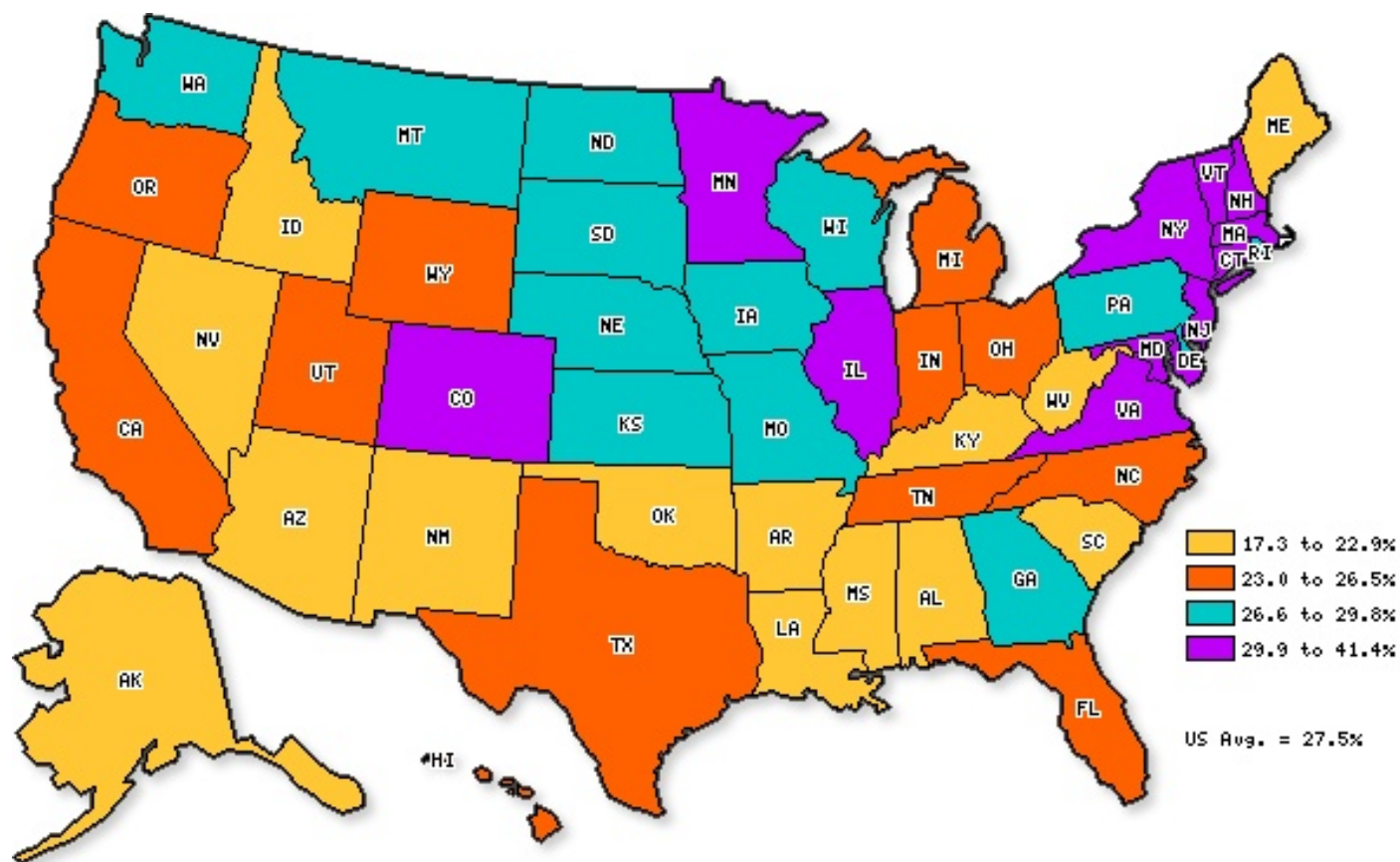


Source: Tom Mortenson, Postsecondary Opportunity

Completion and Level of Education

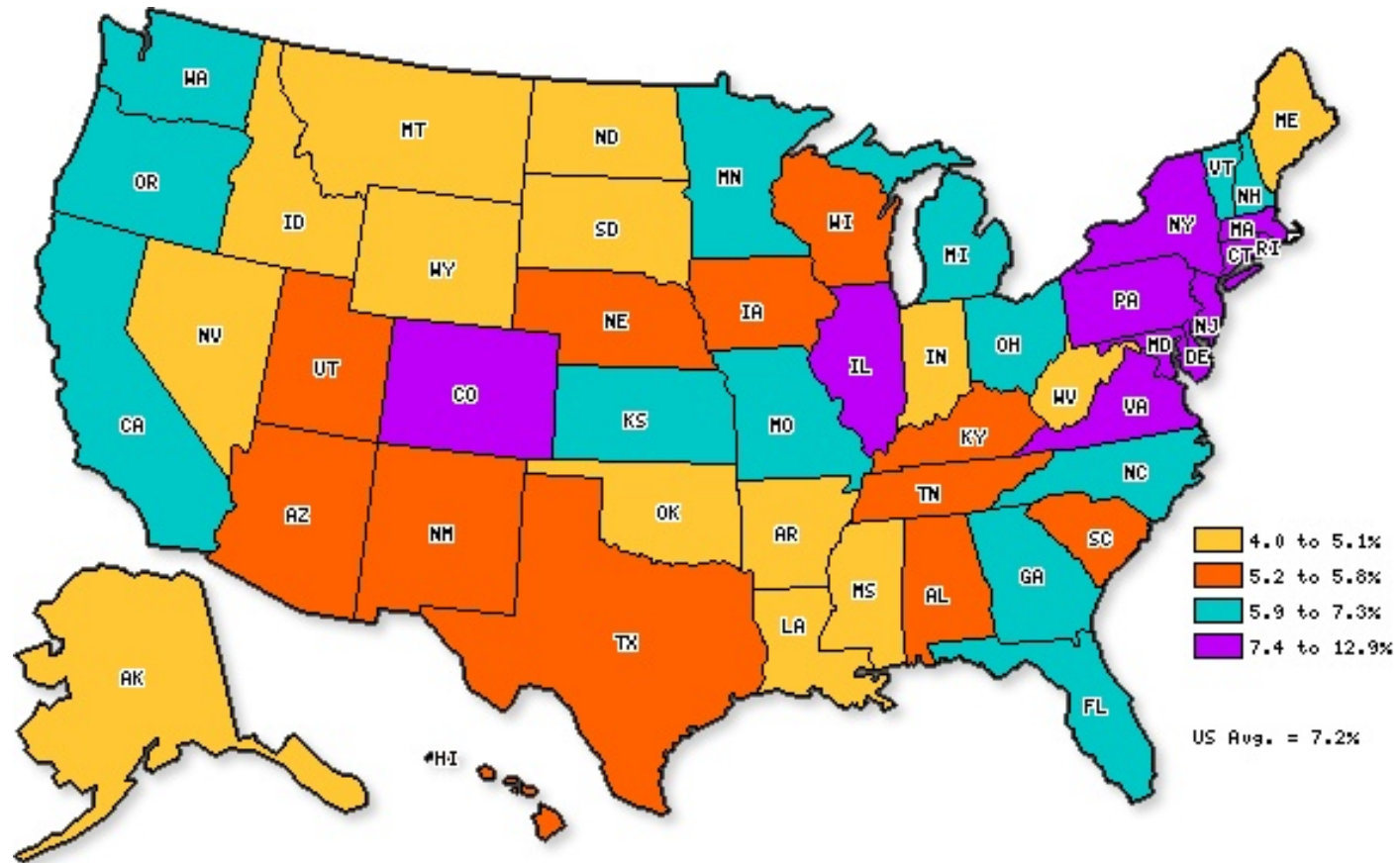
- Education (% with BA or Associate) in KY lags US
- High Variance within Kentucky
- Increases in % with BA or Associate from 1990 to 2000 but slow progress despite high % attending college

25 to 34 Year Olds with a Bachelor's Degree or Higher - 2000



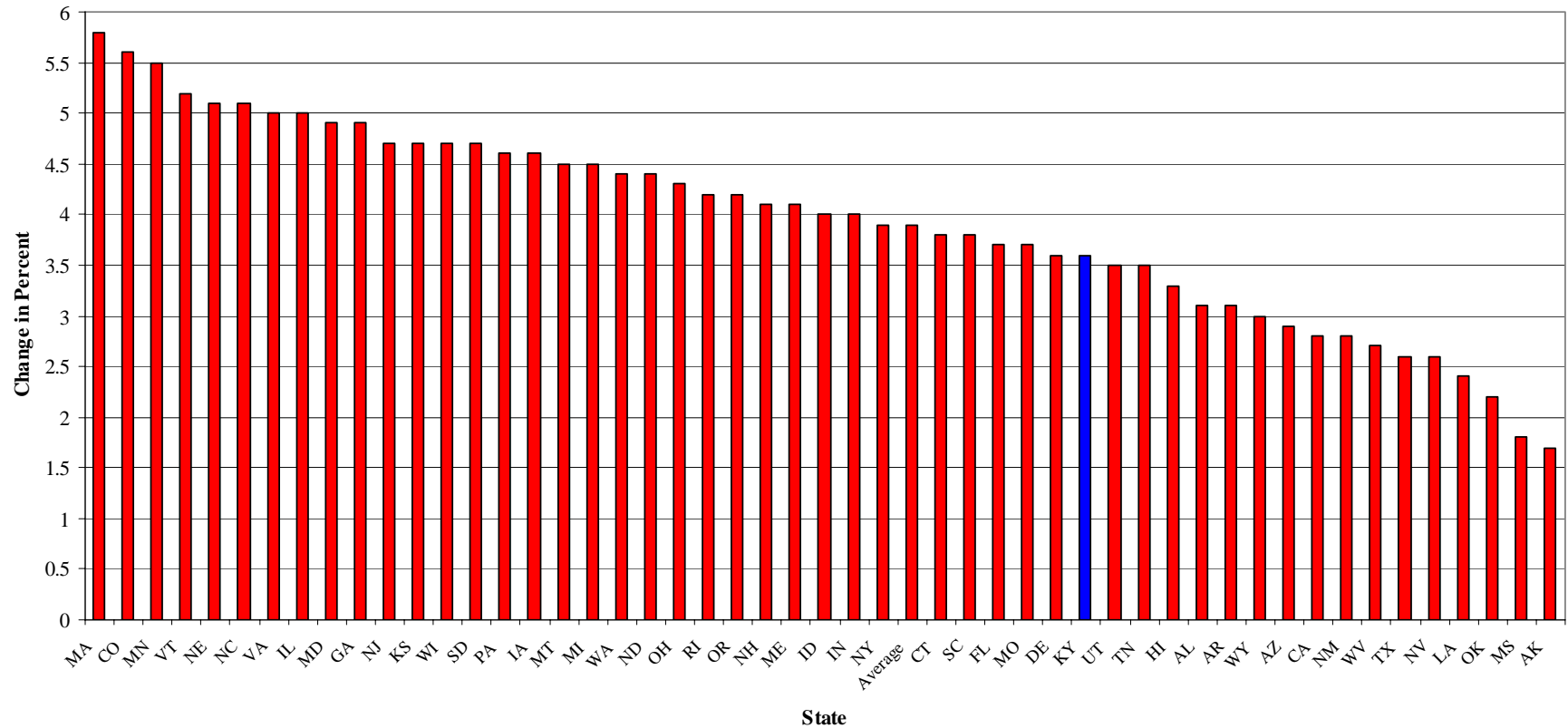
Source: US Census Bureau

25 to 34 Year Olds with a Graduate or Professional Degree - 2000



Source: US Census Bureau

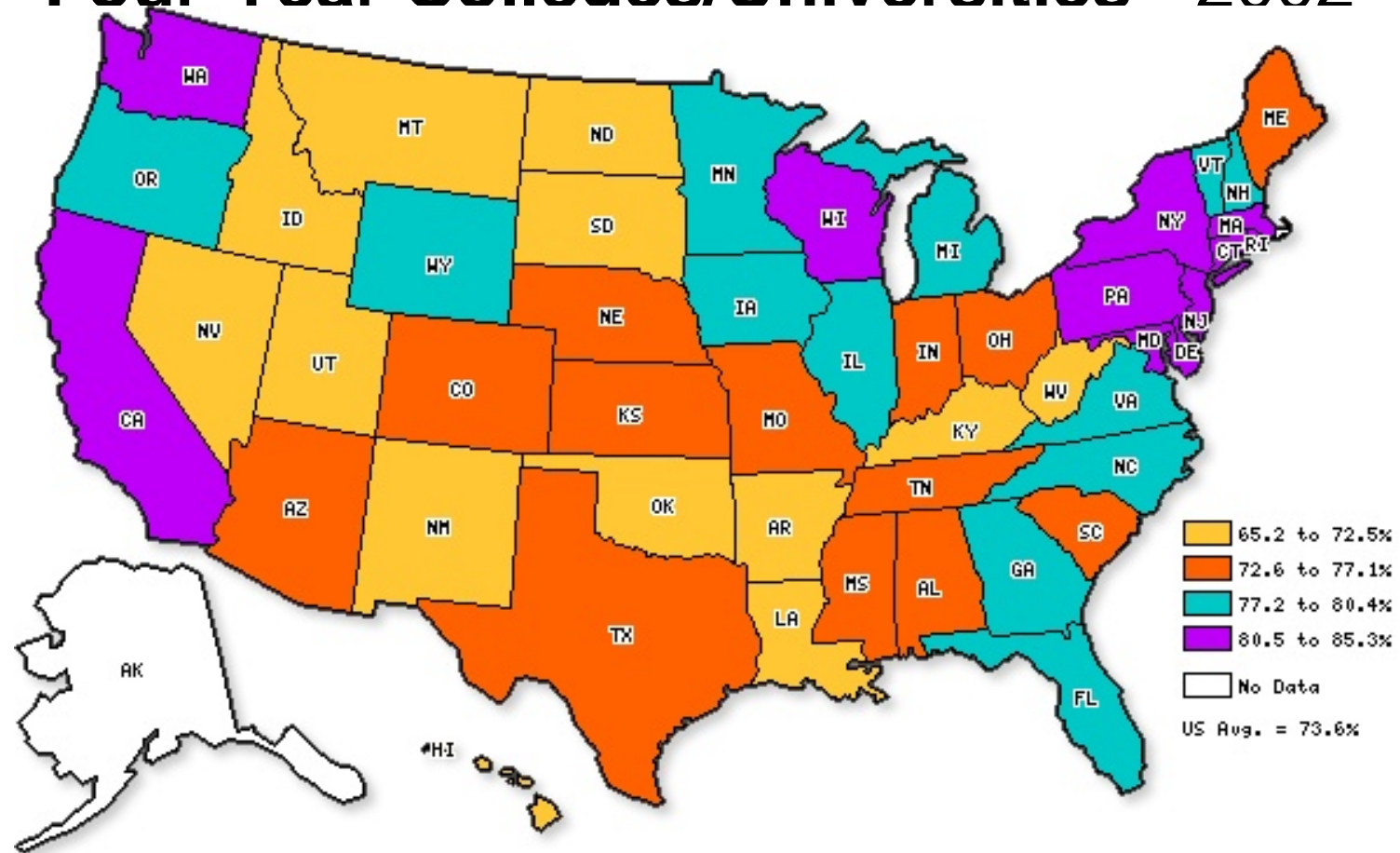
Change in Percentage of Population 25 or older with BA or more, 1990-2000



COMPLETION	KENTUCKY		Top States 2004
	A Decade Ago	2004	
Persistence (20%)			
1st year community college students returning their second year	53%	55%	63%
Freshmen at 4-year colleges/universities returning their sophomore year	69%	70%	84%
Completion (80%)			
First-time, full-time students completing a bachelor's degree within 6 years of college entrance	37%	43%	64%
Certificates, degrees, and diplomas awarded at all colleges and universities per 100 undergraduate students	12	16	21

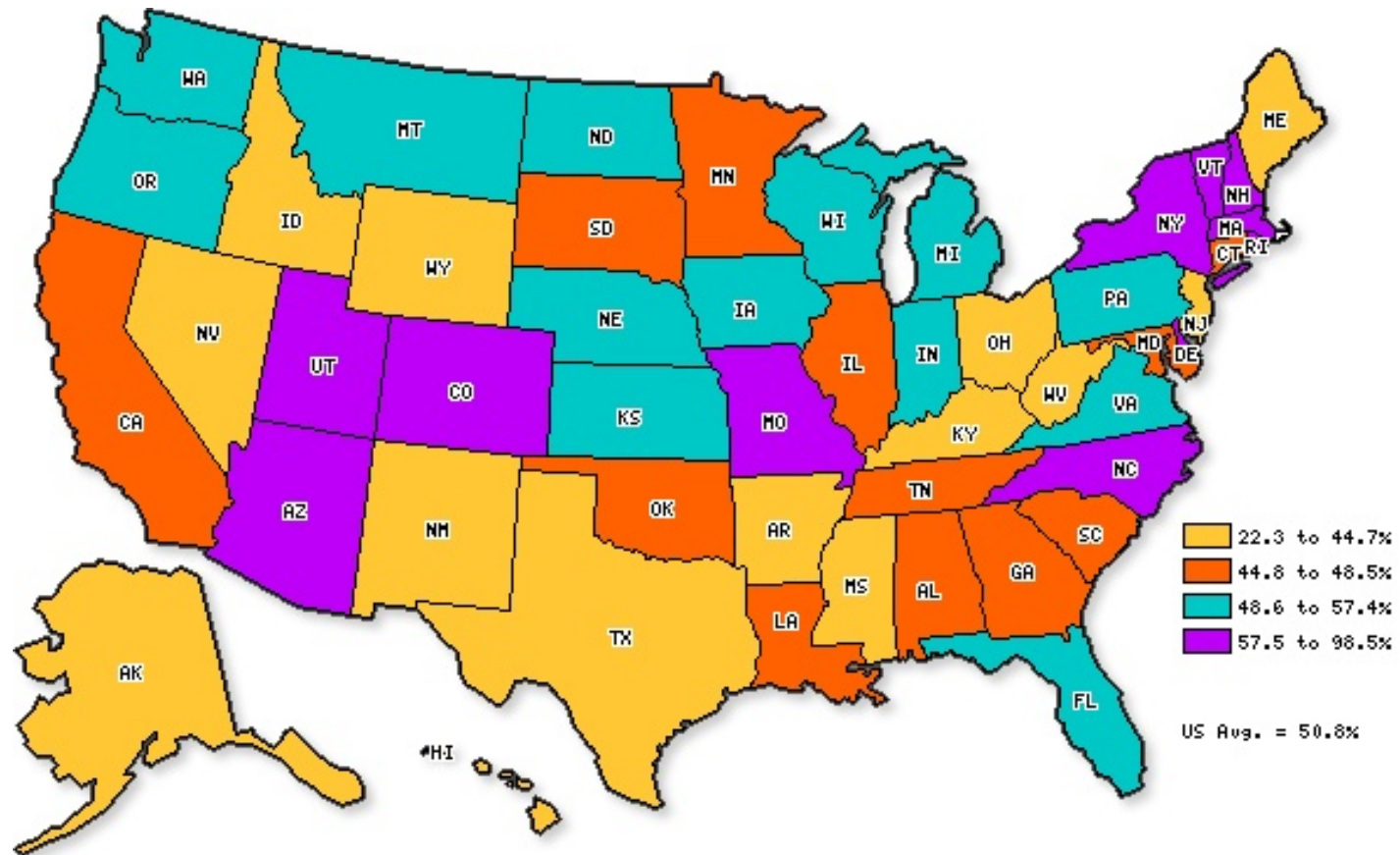
Retention Rates - First-Time College Freshmen Returning Their Second Year

Four-Year Colleges/Universities - 2002



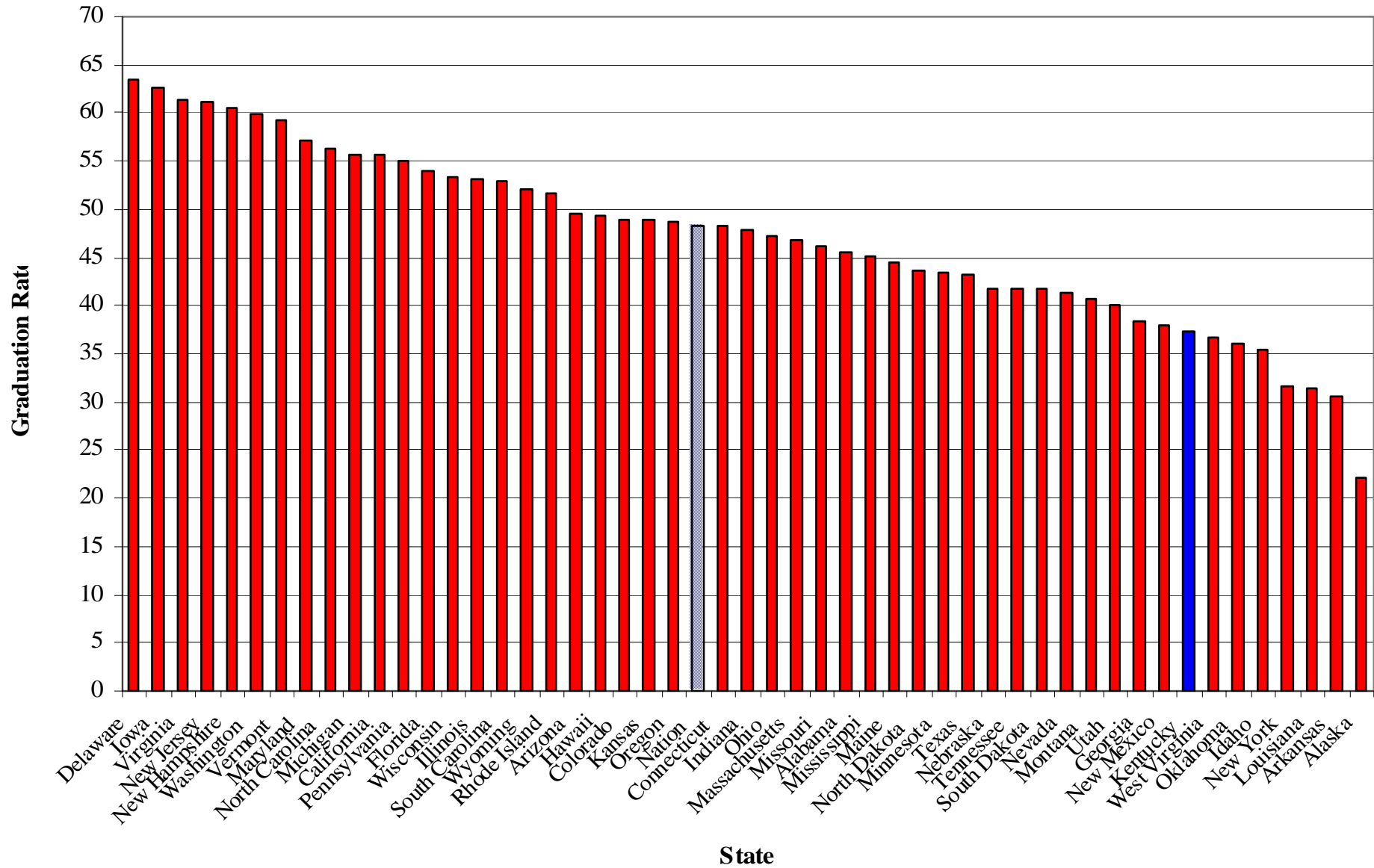
Source: National Center for Public Policy and Higher Education, ACT "Institutional Data Questionnaire", 2002

Bachelor's Degrees Awarded Per 100 HS Graduates 6 Years Earlier



Source: NCES IPEDS Completions Survey, WICHE

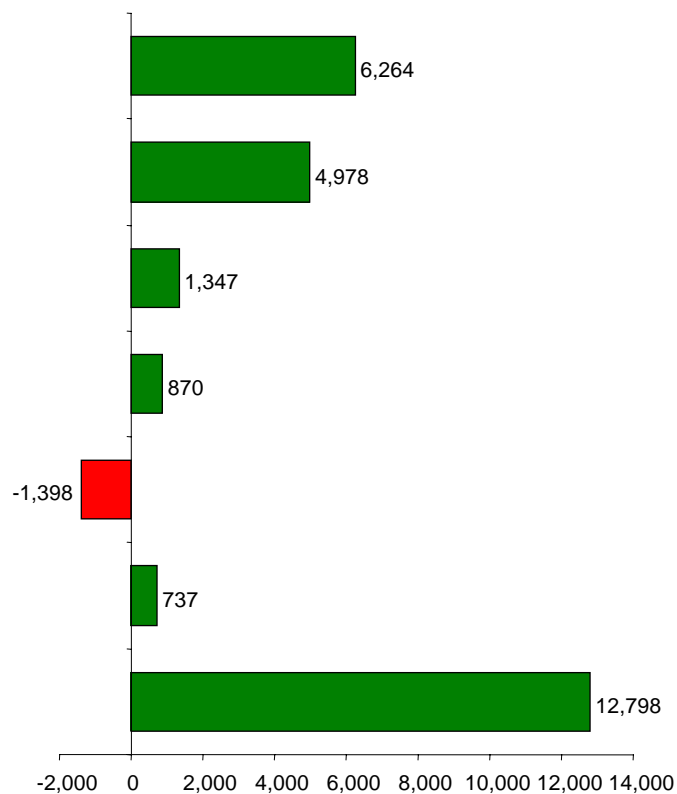
Graduation Rate for Public 4-Year, 2000



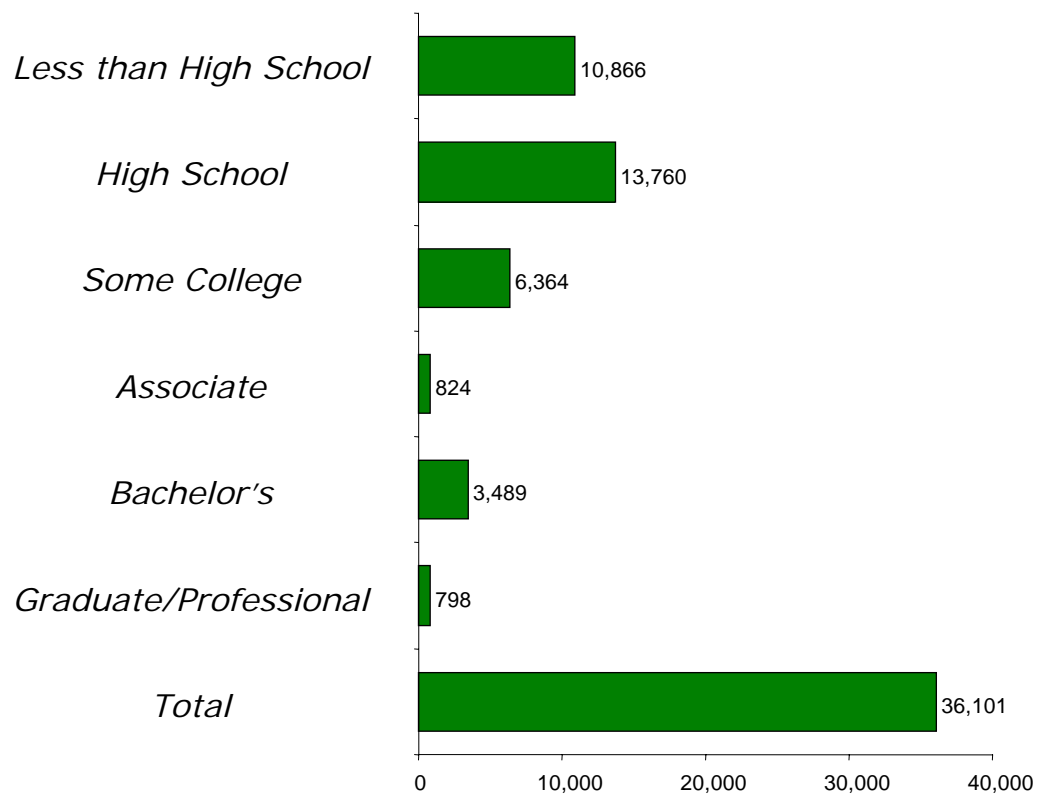
Net In-Migration by Degree Level and Age Group

Kentucky

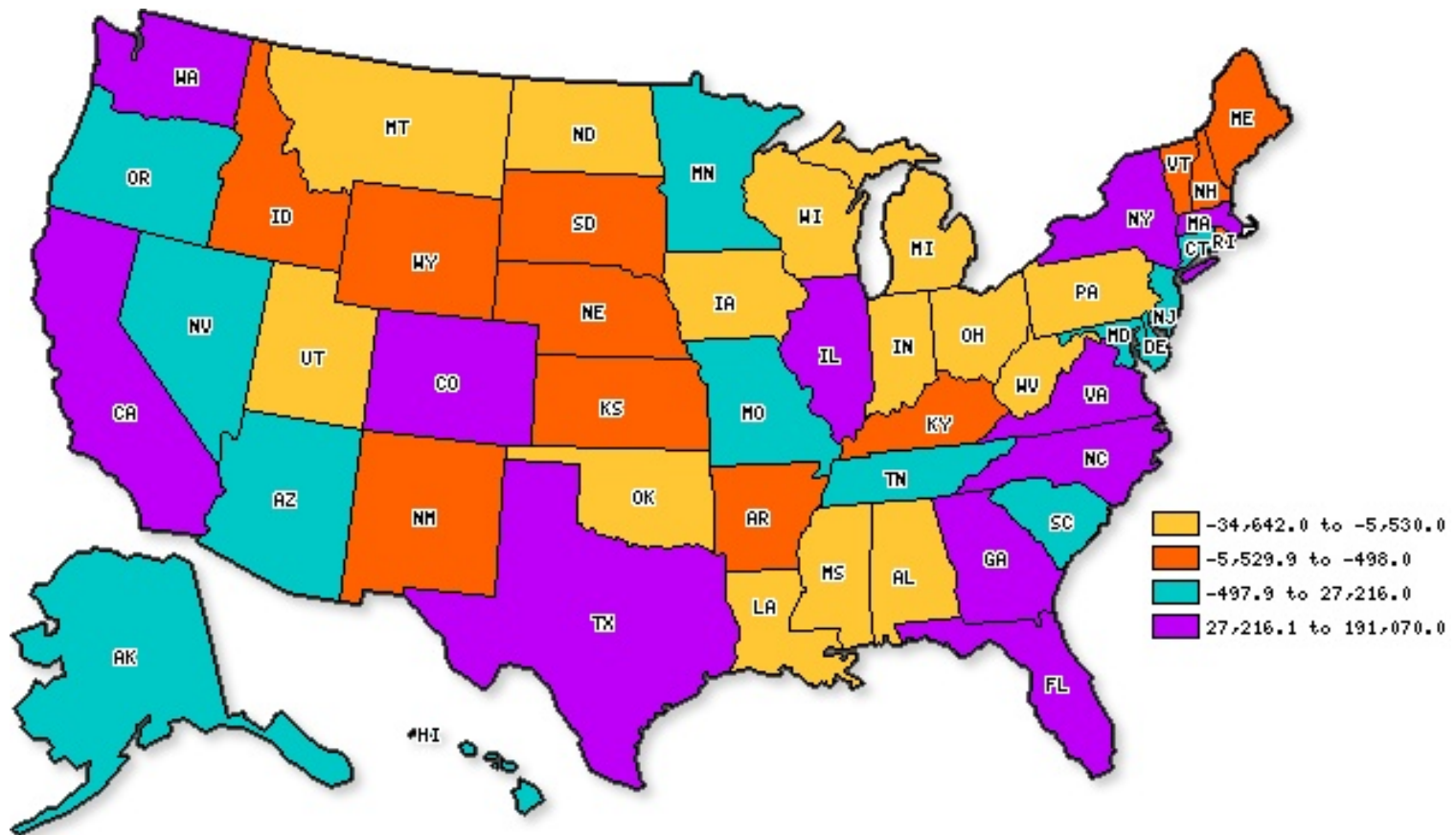
22- to 29-Year-Olds



30- to 64-Year-Olds

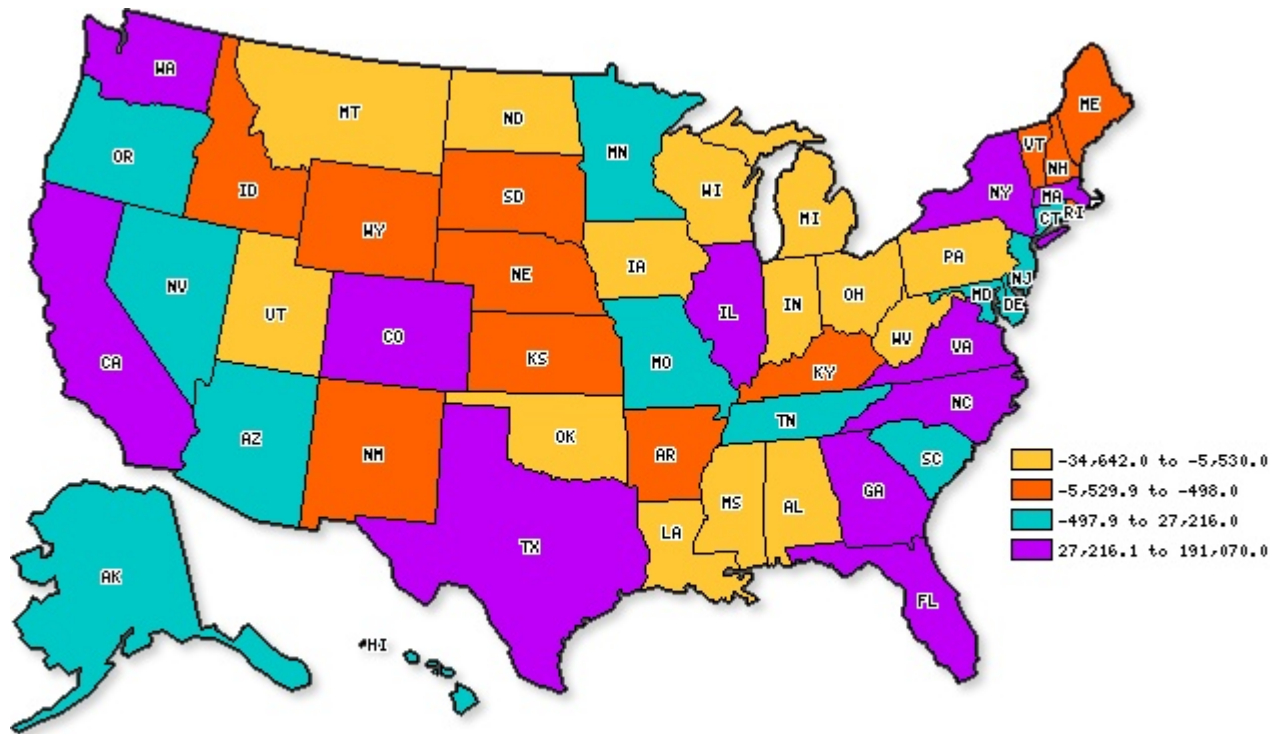


Net Migration, All 22 to 29 Year Olds



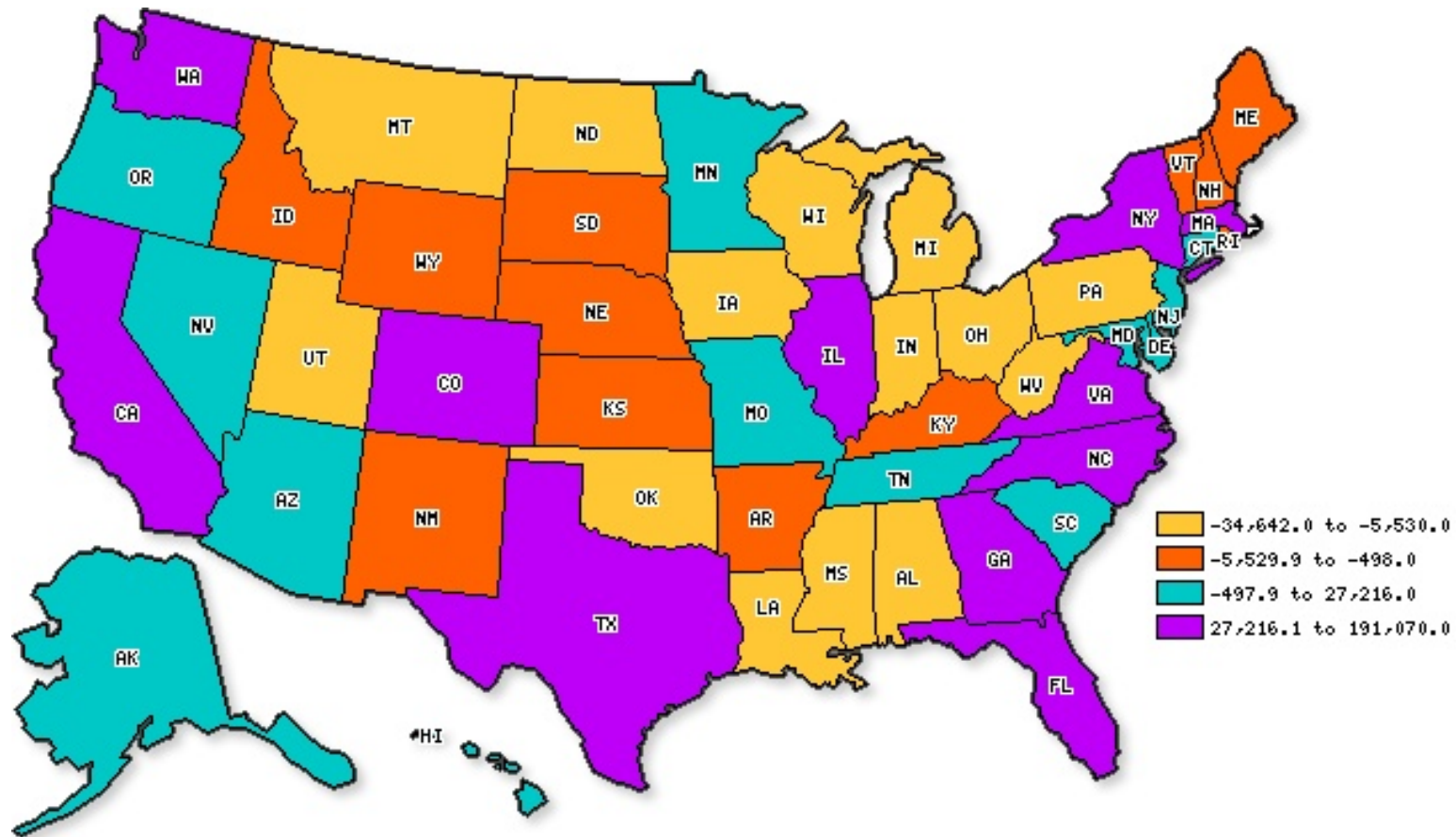
Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Net Migration, 22 to 29 Year Olds with Associate Degree or Higher



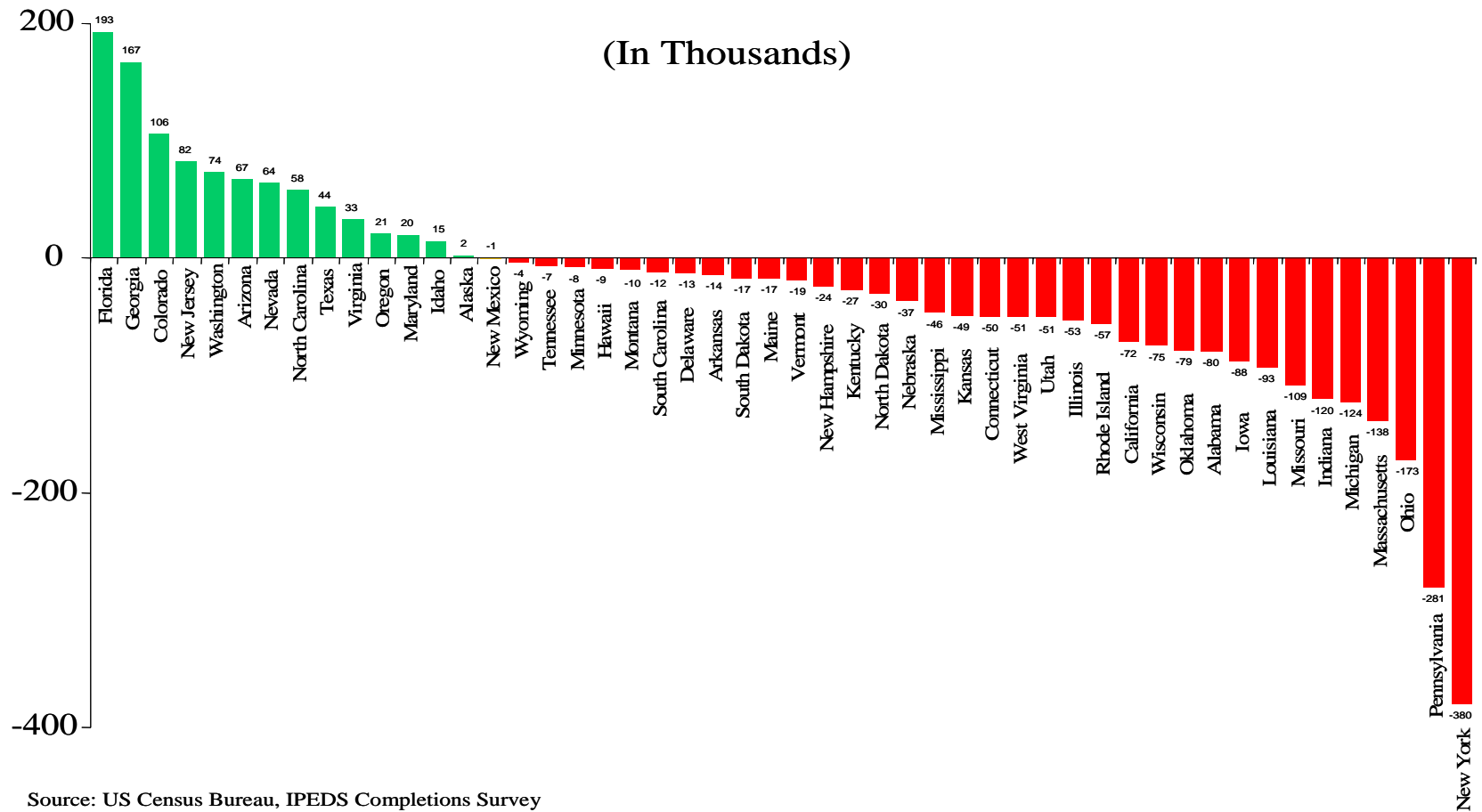
Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Net Migration, 22 to 29 Year Olds with Bachelor's Degree or Higher

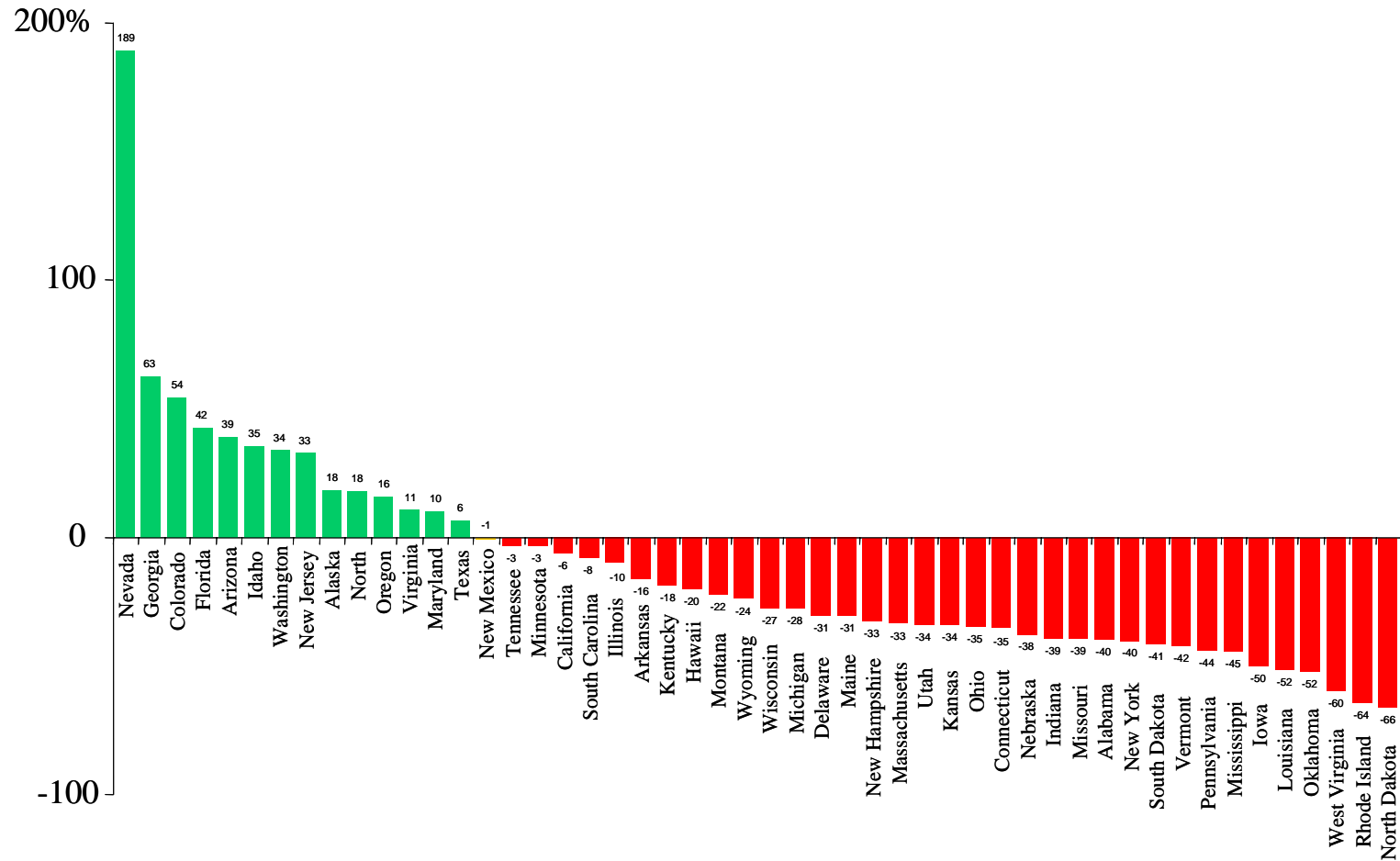


Source: US Census Bureau, Public Use Microdata Samples, Based on the 2000 Census

Interstate Migration of Adults with a Bachelor's Degree or Higher: Change in the Stock of Adults with a Bachelor's Degree or Higher Minus the Number of Bachelor's Degrees Awarded (1990 to 2000) – 25 to 64 Year Olds

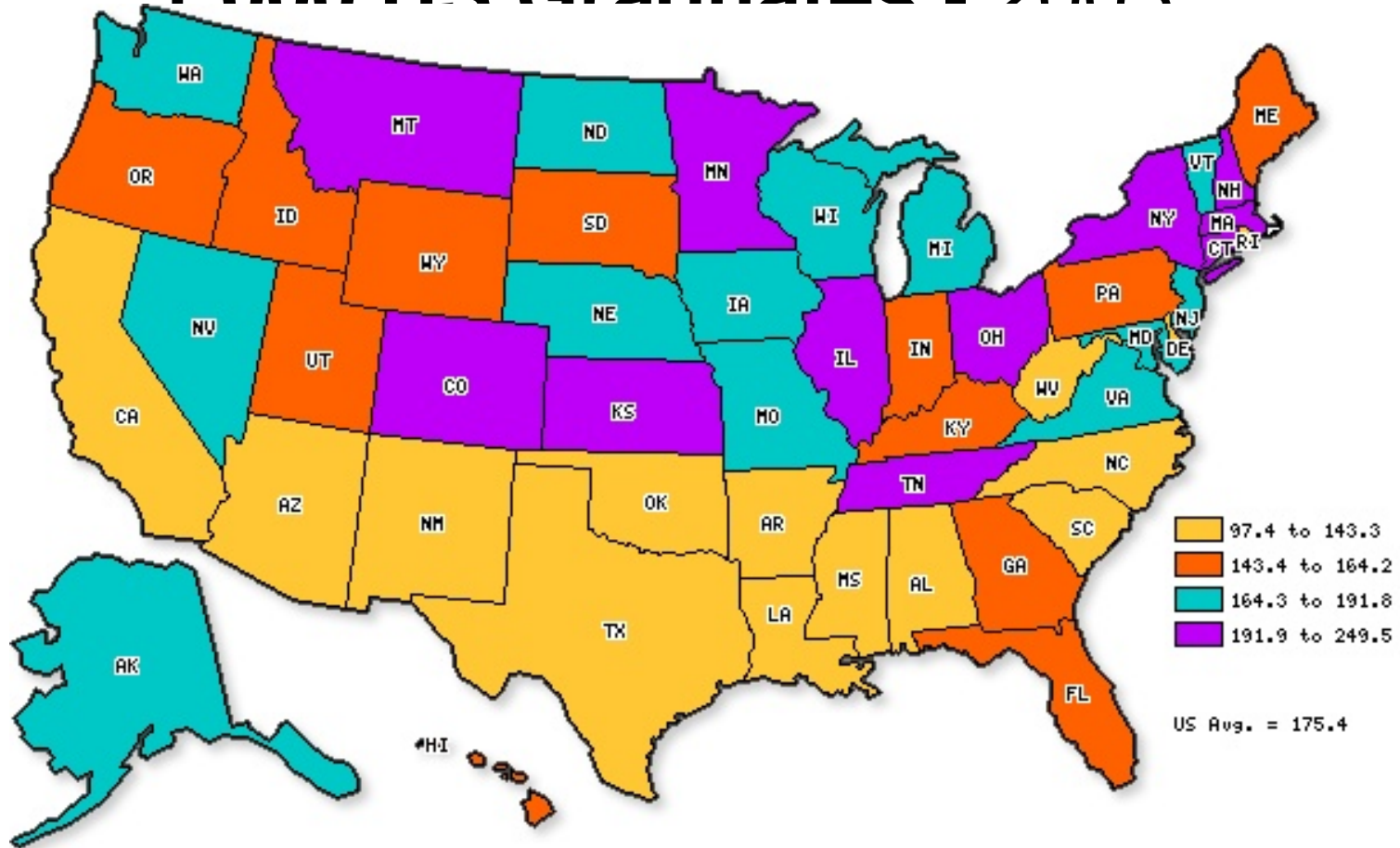


Ratio of Net Migration of Bachelor's Degrees to the Number of Bachelor's Degrees Produced (%) – 1990 to 2000



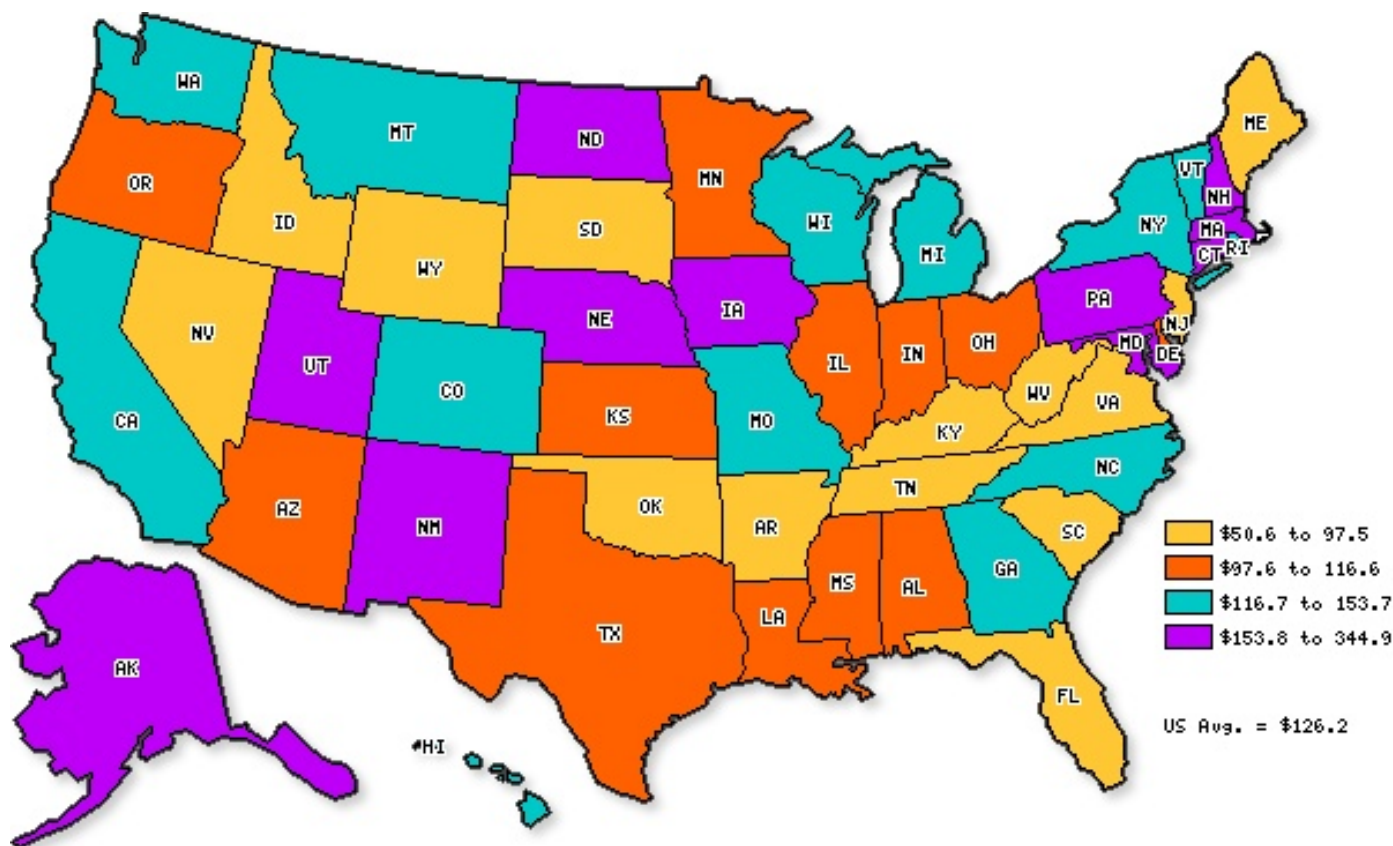
Source: US Census Bureau, IPEDS Completions Survey

High ACT (26 or above) and SAT (combined 1200 or above) Scores Per 1 000 HS Graduates - 2003



Source: ACT, College Board, WICHE

Total R&D Expenditures Per Capita - 2002



Source: National Science Foundation, US Census Bureau