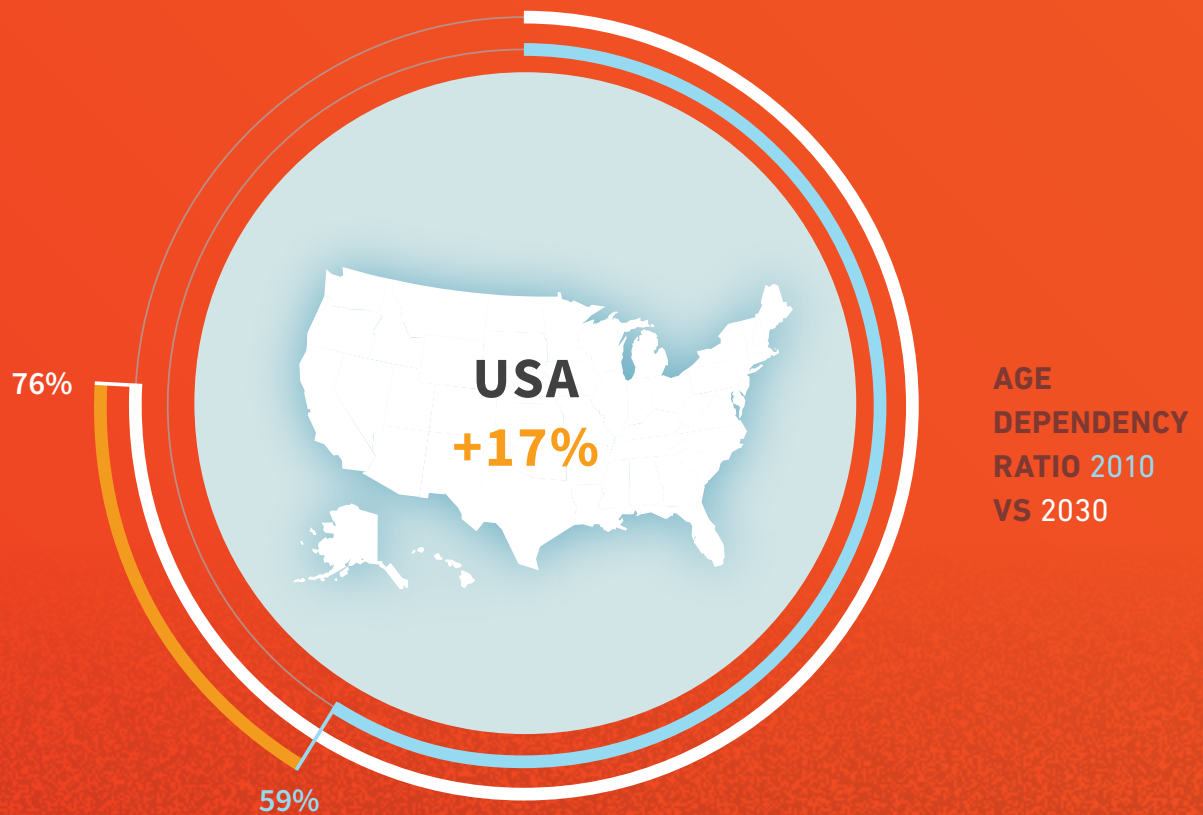JANUARY 2015

USA
+17%

76%

59%

AGE
DEPENDENCY
RATIO 2010
VS 2030

TURN AND FACE
THE STRAIN:

*AGE DEMOGRAPHIC CHANGE AND THE
NEAR FUTURE OF AMERICAN EDUCATION*

BY
DR. MATTHEW LADNER
SENIOR ADVISOR, POLICY AND RESEARCH, FOUNDATION FOR EXCELLENCE IN EDUCATION
SENIOR FELLOW, FRIEDMAN FOUNDATION FOR EDUCATIONAL CHOICE

Cover: Between 2010 — 2030, the Age Dependancy Ratio*
is projected to grow by 17 Percent.

*The age dependency ratio is derived by dividing the combined
under 18 and 65-and-over populations by the 18-to-64 population
and multiplying by 100.

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a movement of reform, state by state, to transform education
for the 21st century economy by working with lawmakers,
policymakers, educators and parents to advance education
reform across America.
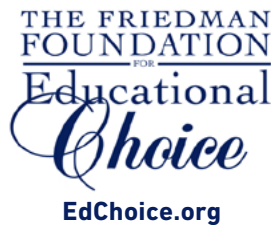
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**Turn and Face the Strain: Age Demographic Change and
the Near Future of American Education** was developed
through a partnership between the Foundation for Excellence
in Education and the Friedman Foundation for Educational
Choice, two of the foremost leaders in education reform policy
and research.

FOREWORD: AMERICA ENTERS A CHALLENGING AGE
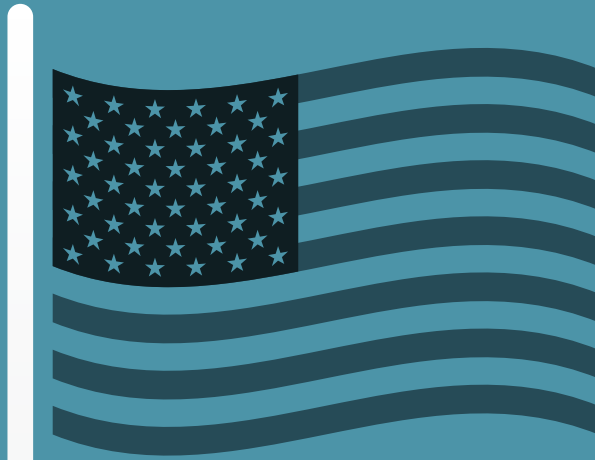
The myth that bigger budgets will lead to better public education has been refuted by years of research, yet a state's commitment to quality schools often is measured by how much it spends on them.

As detailed in this groundbreaking report by Dr. Matthew Ladner, that approach not only has failed but also is no longer sustainable given the demographic trends facing our nation.

The number of Baby Boomers entering retirement has been well documented. As they leave the workforce, their contributions to government revenues will decline while their demands on government expenditures will increase. We tend to focus on the impact this will have on services, entitlement programs and public employee pension funds. But as Dr. Ladner points out, there also will be a very real impact on our public education system because the growing number of retirees is accompanied by a second demographic phenomenon – the growing number of school-age children.

Sandwiched between the young and old is a shrinking percentage of workers that must provide for both their needs. They are becoming the rope in an unprecedented demographic tug-of-war because there is only so much wealth they can create. States will be forced to juggle competing demands with limited resources.

The inevitable result will be a retreat from the pay-more model of public education, replaced by models that are more efficient and more effective at preparing all children for a college or career. The latter is critical. Our children confront the most competitive global economy in world history. It is an economy that prioritizes knowledge and skills, yet international assessments in math and science show American students steadily losing ground to students in other countries in these subjects.

That trend must be reversed if America is to maintain its prosperity and its leadership role in the 21st century. We must do so quickly, cost-effectively and by all means possible. This means actively reforming policies that deal with teacher quality, governance, finance, digital learning and accountability. We must set expectations for students at a level that will prepare them for the challenges ahead.

An obvious priority is customizing education in a way that empowers parents with a marketplace of education choices, allowing parents to pick the best options for their children. The resulting competition will improve results and incentivize cost savings.

There already is choice for families that can afford private school tuition, or to live in neighborhoods with top public schools. The parents denied choice are the ones whose incomes don't allow them such privileges. And so it's hardly surprising that their children attend the most ineffective schools and lag behind far their more affluent peers in reading, math and science.

The achievement gap that has bedeviled our education system for so long is in large part an opportunity gap. School choice is an argument for education equality.

And as you will see in Dr. Ladner's report, it also is an argument for confronting the economic challenges ahead. Business as usual no longer is an option that states can afford.

Patricia Levesque

Patricia Levesque
CEO, Foundation for Excellence in Education

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In rich countries, this generation of adults is not doing well by its children. They will have to pay off huge public-sector debts. They will be expected to foot colossal bills for their parents' pension and health costs. They will compete for jobs with people from emerging countries, many of whom have better education systems despite their lower incomes. The least this generation can do for its children is to try its best to improve its state schools. Giving them more independence can do that at no extra cost. Let there be more of it.

—THE ECONOMIST[1]

SHARP TURN AHEAD:

BOOMERS RETIRE AND SEND THEIR GRANDCHILDREN TO SCHOOL

All states will experience a profound increase in their elderly populations over the next decade and a half. It doesn't look to get much easier after that. The data presented below will show that the vast majority of states will have a higher percentage of elderly residents than Florida does today. Many states will simultaneously wrestle with increases in their youth population. The revenue, health care and education implications appear incredibly challenging.

Who will be paying the taxes to maintain public spending on schools, hospitals, courts, jails and roads a decade and a half from now? Many of the working age taxpayers of 2030 and beyond sit in school classrooms *now.* Our current set of policies have been setting up middle-aged, working-age taxpayers of 2030 and beyond to fail rather than to succeed in life.

The scale of these challenges will certainly force substantial changes in both society and public policy in ways that are impossible to predict confidently. We can, however, clearly say the following: *the solving of tomorrow's problems needs to start today.* World-class academic knowledge and skills might prove quite useful as tomorrow's taxpayers struggle to afford health care for the aged and education for the young. As currently constituted, the American education system is world class in spending but subpar in results.[2]

On every single day between now and the year 2030, 10,000 members of the Baby Boom generation will reach the retirement age of 65.[3] Meanwhile, the youth population will continue to grow, sending the descendants of Boomers into the K-12 education system.

Americans will face the need to reformat their social welfare state – including but not limited to elementary and secondary education as a result. With regards to K-12 education, we need a substantially more effective and cost-effective education system sooner rather than later. We have thus far taken only tentative experimental steps needed to achieve such a result, but time on our demographic clock will be running out at a much faster pace.

Analysts have tended to focus studies of demography on ethnic makeup of the population – and not without cause. A recent breakdown by the United States Department of Education of the American results on international exams

revealed American black and Hispanic students have average scores closer to those of Mexico than South Korea.[4] In a country with a growing number of "majority minority" K-12 student populations, this is no small matter – more like a national emergency.

Age demography, however, may have an even larger impact on the K-12 education system than ethnic change. Various factors are driving this trend, but at the heart of the matter rests the unavoidable fact that the post-World War II "Baby Boom" generation – a cohort of 76 million Americans born in the aftermath of World War II and ending with the introduction of the birth control pill in the early 1960s – is moving into retirement.[5] Millions of people moving out of the workforce will have a profound impact on government policy – most notably with regards to public health care insurance and pensions.

The Millennial generation, a cohort of 80 million people born after 1980 and largely the children of Boomers, has moved into the workforce and started producing children of their own. Census Bureau projections show that youth population growth will occur along with the growth in the elderly population.[6] An increase in the size of the elderly population places a strain on health care and pension systems, while surges in the youth population creates an increased demand for education spending.

The elderly generate less than average tax revenues because they have exited the labor force, while children have yet to enter it.[7] Since the working-aged taxpayers of 2030 and beyond sit in American classrooms now, substantial improvement in K-12 education results represents an incredibly urgent need. Most discussions of age demography in America inevitably drift toward the looming solvency challenges in federal entitlement programs, for understandable reasons. These same forces, however, will profoundly impact state budgets and thus K-12 education, meriting the focus of this paper.

American education must grow both substantially more effective and more cost-effective. In short, policymakers can either preside over a managed decline of a K-12 education system that spends less and achieves less, or more optimistically one that spends less and achieves more. Demographic change will increasingly pressure state policymakers to seek better and less expensive K-12 education delivery systems.

If you can look into the seeds of time,
And say which grain will grow and which will not,
Speak then to me, who neither beg nor fear
Your favours nor your hate.

–MACBETH[8]

HUBBLE BUBBLE:

THE TRICKY CRAFT OF POPULATION FORECASTING

The Census Bureau projections indicate that some states will have things considerably tougher than others, but a few notes on forecasting seem appropriate before forging ahead. Most importantly: how much stock should we put in forecasts? This study makes use of the United States Census Bureau's 2005 Interim State Population Projections, a more recent 2012 Census Bureau National Forecast and a scattered number of forecasts performed by state governments. These forecasts largely tell the same story, and the reader should keep in mind that the differences that do occur represent differences in forecasts only. No one can be certain what will ultimately happen, leaving us to make do with the best information available.

Yogi Berra once noted that **"it's tough to make predictions, especially when it is about the future."** This certainly applies to projecting future population trends.

Forecasters of any type have difficulty dealing with improbable but highly impactful events.[9] The Census Bureau bases its population estimates on a variety of factors – estimated birth rates, interstate migration rates, immigration rates and death rates. Changes of the available data and underlying forecast assumptions can and will impact the ultimate accuracy of medium range and (especially) longer range forecasts. While the Census Bureau works diligently in order to maintain public confidence, readers should note the difficulties inherent in forecasting of any type.

One should understand the ability of demographers to model unlikely (thankfully) but potentially catastrophic events as effectively non-existent. A nuclear war, a catastrophic asteroid strike or a devastating plague does not fit comfortably in a statistical model. Fortunately such events don't seem likely to occur, but if they do, try not to blame the Census Bureau – they are experts but they are only human.

Like Banquo's inquiry to Shakespeare's witches, we would all like to know the future with certainty. Paraphrasing Erasmus, an old expression among social scientists holds that "in the land of the social science blind the demographer is the one-eyed king." The vision of the king is pretty good but not perfect. Forecasts depend highly upon the underlying assumptions made. If you assume higher fertility rates, you get larger estimates, lower rates of immigration, lower estimates, etc. Demographers have sophisticated methods for making estimates of such factors, but looking into the seeds of time is arcane only in the sense of being complicated – not magical or infallible.

Moreover, unlike Macbeth's witches, our soothsayers do not always speak with a single voice. State governments have

conducted or are currently in the process of conducting age population projections incorporating 2010 Census data. The Census Bureau itself has yet to do so. Some unexpected events, like a major recession, occurred between 2005 and 2010, making these projections of considerable interest.

Today, the public can only access these state generated projections on a piecemeal basis. Many states have not published any new estimates; others have published new estimates but have not published projections of the age demographics. Of the states that have published age projections, almost none use the age bracket most closely resembling the school age children provided by the Census Bureau (ages 5-17).

The outlook however proved better in the case of projections of state elderly populations. Of the states that have published their own age related projections, almost all provide an estimate for the number of 65 and older people in 2030.[10]

The majority of available state age projections increase the estimate for the elderly population over the 2005 Census Bureau estimates in either a slight or occasionally by a large amount.[11] For the sake of consistency, the graphics and tables in this report related to population references predominantly uses the Census Bureau 2005 Interim State Population Projections estimate, as they are the most recent source available for all 50 states. The state pages will also note available state projections.[12] In the future the Census Bureau will create new forecasts for all states in a systematic fashion, allowing us to update our present study as well.

In addition to federal and state forecasts, a variety of academics and private firms routinely make population projections of their own utilizing Census data but varying from the Census Bureau's own projections. Diversity in viewpoints and assumptions should be expected as a matter of course. For the purposes of this paper, we do not view population estimates as a contest, but rather rely upon the professionalism of the Census Bureau to provide the best estimates possible and to update them as new information comes available.

The technical track record of Census Bureau accuracy also merits consideration. Census Bureau self-assessment documents reveal the impact of technical details on forecast accuracy. The Census Bureau for instance studied the accuracy of projections based upon the 1990 Census data compared to the actual 2000 count. The rates of domestic migration drove almost all of the differences between the state level population projections based upon 1990 data

and their 2000 Census counts. The projections based upon 1990 data matched those of the 2000 Census count almost precisely on death rates and net foreign migration. The predictions regarding birth rates proved most accurate of all.

What the Census Bureau describes as "undercounting" in the 1990 Census led to the 2000 Census count exceeding projections based upon 1990 data in 47 of 50 states.[13] Most notably the projections based upon 1990 Census data underestimated the population of fast-growing Arizona and Nevada by over seven percent each. Estimates based on the 2000 Census overestimated the total population growth of Arizona by 4 percent but came close on Nevada's estimate. Overall, the projections based on 1990 data underestimated the average 2000 state population by one percent.

The 2010 state population estimates based upon 2000 Census data, when compared to 2010 Census counts, showed a similar average underestimate of overall population growth for the average state of one percent. A comparison between the projections of 2010 state population data and the 2010 Census count again revealed a tendency to underestimate population growth rather than to overestimate it – 42 out of 50 states came in with a higher 2010 population estimate than the forecasted.

Given the complexity of the task, a tendency to underestimate state population growth by an average of one percent instills a degree of confidence. Considering that the counts themselves cannot be viewed as error free, estimates with an average of one percent variance from counts seem relatively reliable. The 2005 interim estimates on the age composition of states in 2010 proved to be more accurate still than those for total population. Estimates must however be updated on a continual basis as new information comes available – small deviations in expected outcomes can become larger variations from estimates over time.

Like Banquo claiming to neither beg nor fear the favor of the witches, the Census Bureau does not have a position on any of the state policy debates. Estimates can and will change over time, but overall the Census Bureau has no clients to please, no axe to grind in state policy debates and a pretty decent track record.

With these caveats in mind, our modern demographic prophets forecast toil and (especially) trouble ahead.
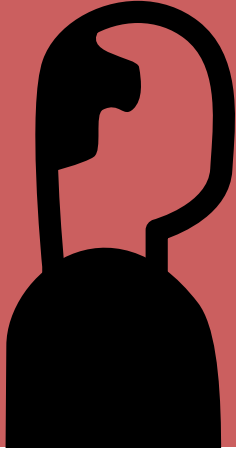
FORECAST:

HURRICANE GRAY MAKES LANDFALL IN ALL 50 STATES

In 2014, your author was waiting to board a flight to Miami from Phoenix. One gentleman in line observed "We've got a lot of pre-boards on this flight." In this case, the pre-board passengers were all elderly, with many in wheel chairs. Another person waiting in line replied "It happens every time I fly to Florida."

Now imagine boarding a plane in 2030.

The Census Bureau projects that by 2030 44 out of the 50 states will have a higher percentage of their population aged 65 or older than the oldest state (Florida) did in 2010. **All 50 states will be higher than they were in 2010.**

In other words, the retirement mecca of 2010 will look typical in 2030, but the older states of 2030 will sail into unchartered waters.

Another way to look at the increase is in absolute terms. The 2005 Census Interim Projection lists 40,243,713 residents age 65 or older in 2010 and 71,453,471 by 2030.

This means a projected increase in the elderly population of 31,209,758—making the increase approximately the size of the nation's current elderly population, minus those living in California and Florida. Put another way, the projected increase in the elderly population almost equals that of the current elderly population of 48 states.

Multiple states are projected to have one in four or more residents who are elderly.

Sometimes described as a "Hurricane Gray," the aging of the population between now and 2030 will profoundly impact all aspects of the financing and operation of American social welfare functions.[14]

State policymakers should expect to wrestle with increased demand for public health care spending and slower tax revenue growth, discussed in the coming pages.

Projected Increase in 65+ Population by State in 2030

● **0% TO 50%** ● **51% TO 100%** ● **101% TO 150%** ● **151%+**
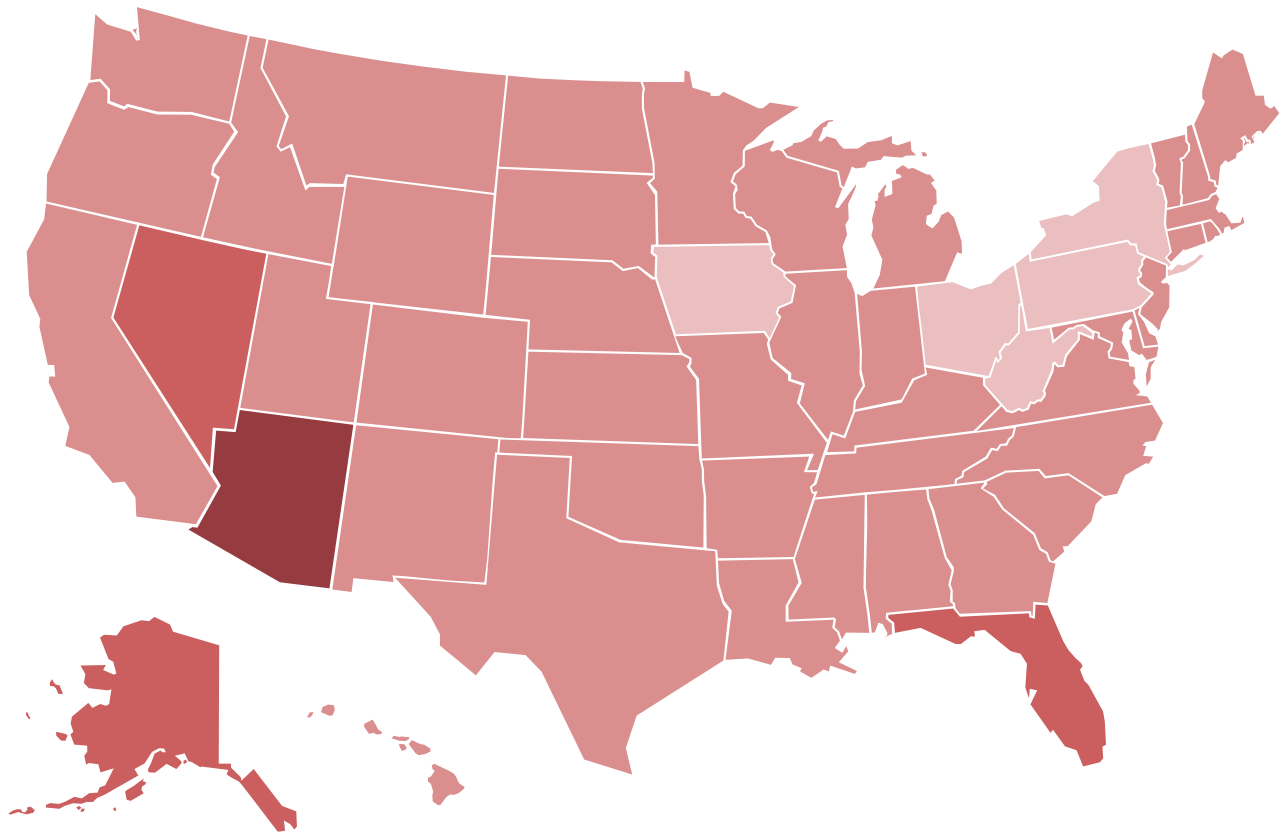
State / Percent Increase:

AZ	**157**	GA	**95**	MN	**78**	SD	**62**	CT	**54**
NV	**142**	WY	**91**	OR	**78**	MA	**61**	NE	**54**
FL	**127**	DE	**90**	ME	**76**	AL	**60**	OK	**53**
AK	**125**	CA	**89**	MD	**72**	AR	**59**	IN	**52**
TX	**100**	NC	**87**	HI	**71**	NJ	**59**	IL	**51**
ID	**99**	SC	**87**	TN	**71**	KS	**58**	OH	**49**
NM	**99**	MT	**86**	WI	**70**	MO	**58**	NY	**48**
NH	**97**	VT	**86**	MS	**67**	ND	**57**	PA	**48**
WA	**97**	CO	**85**	KY	**62**	RI	**57**	IA	**47**
UT	**96**	VA	**85**	LA	**62**	MI	**56**	WV	**46**

44

Number of states projected to have a higher elderly population in 2030 than the 2010 highest, Florida.

As you can see, all states will wrestle with a vast increase in their elderly population.

Many factors impact age projections – including estimates of death, fertility and migration rates. One can identify the main culprit of our demographic challenges rather easily, however: the Baby Boom generation has already begun to reach retirement age.

By 2030, this process will have played out. Many Baby Boomers will live to see grandchildren and sometimes great grandchildren born and head off to school. The Census projections foretell a number of large impacts on public policy at all levels of government and society. Policies impacted by the aging of society will include obvious areas such as health care programs like Medicare and Medicaid, social insurance retirement programs like Social Security, and pension programs for public employees and public efforts to insure private pensions.

Obviously, Uncle Sam will have his hands full between now and 2030 with programs such as Medicare and Social Security.

Tempting though it may be to focus on the long-term federal balance sheet and social insurance solvency issues, our focus will remain on state government and on education policy, both of which will be strongly impacted by the shift in age demographics.

Historically more than 90 percent of K-12 education funding comes from state and local sources. Given the medium and long-term challenges at the federal level, the federal government will likely find itself highly constrained from playing a larger financial role in K-12 education. Indeed we have reason to anticipate a more modest financing role from the federal government in the years ahead as the United States Congress faces daunting fiscal challenges.

Age demographic change will impact state budgets in a variety of ways, starting with revenue. The elderly have typically passed their prime earning years. States with growing elderly populations can expect to see a slower rate of tax revenue growth as the elderly earn and spend less. Many economists expect the aging of the population to slow the national rate of economic growth. The Congressional Budget Office (CBO) projects the aging of the population to slow future economic growth. In a 2014 report, the CBO predicted:

Beyond 2017, CBO expects that economic growth will diminish to a pace that is well below the average seen over the past several decades. That projected slowdown mainly reflects long-term trends—particularly, slower growth in the labor force because of the aging of the population.[15]

Diminished economic growth translates to a slower rate of revenue growth for government. Northwestern University economist Robert J. Gordon recently forecast a decelerating rate of economic growth for the American economy in a National Bureau for Economic Research paper. Dr. Gordon described the negative impact of an aging population on the rate of economic growth as "widely recognized and non-controversial." Gordon noted that inflation adjusted gross domestic product per capita increased by two percent per year between 1891 and 2007, but forecast a decline to an annual rate of 0.9 percent for the 2007-2047 period.[16]

If the American economic growth rate does in fact decline by more than one half – or anything like it – the implications for state budgets will prove dire indeed. The health needs of the population and our ability to pay for them represent two separate calculations. The assumed rate of economic growth always looms large in attempts to forecast the sustainability of government programs.

The rate of health care spending increase has exceeded the rate of economic growth for decades, consuming an ever growing portion of national income. The Office of the Actuary at the Center for Medicaid and Medicare Services project the divergence between health care spending and economic growth will continue to grow – specifically forecasting a 2.1 percent faster rate for health care spending increases than economic growth from 2008 to 2018.[17] The differences in rates compound over time to make health care spending increasingly difficult to sustain.

State Populations Aged 65 and Older for 2010 and Projected 2030 by Percentage Increase

Percent Increase	State	2010 65+ Population	2030 Projected 65+ Population	Projected Increase 2010-2030	Projected Percent Increase
101%+	ARIZONA	922,010	2,371,354	1,449,344	157%
	NEVADA	329,621	797,179	467,558	142%
	FLORIDA	3,418,697	7,769,452	4,350,755	127%
	ALASKA	56,548	127,202	70,654	125%
81–100%	TEXAS	2,587,383	5,186,185	2,598,802	100%
	IDAHO	181,416	361,033	179,617	99%
	NEW MEXICO	278,967	555,184	276,217	99%
	NEW HAMPSHIRE	178,823	352,786	173,963	97%
	WASHINGTON	795,528	1,563,901	768,373	97%
	UTAH	234,798	460,553	225,755	96%
	GEORGIA	980,824	1,907,837	927,013	95%
	WYOMING	72,658	138,586	65,928	91%
	DELAWARE	124,972	237,823	112,851	90%
	CALIFORNIA	4,392,708	8,288,241	3,895,533	89%
	NORTH CAROLINA	1,161,164	2,173,173	1,012,009	87%
	SOUTH CAROLINA	605,660	1,134,459	528,799	87%
	MONTANA	144,961	269,558	124,597	86%
	VERMONT	93,442	173,940	80,498	86%
	COLORADO	517,419	956,278	438,859	85%
	VIRGINIA	994,359	1,843,988	849,629	85%
61–80%	MINNESOTA	670,429	1,193,124	522,695	78%
	OREGON	494,328	881,957	387,629	78%
	MAINE	212,278	374,017	161,739	76%
	MARYLAND	717,987	1,235,695	517,708	72%
	HAWAII	191,065	326,957	135,892	71%

State Populations Aged 65 and Older for 2010 and Projected 2030 by Percentage Increase
[cont'd]

Percent Increase	State	2010 65+ Population	2030 Projected 65+ Population	Projected Increase 2010-2030	Projected Percent Increase
61–80%	TENNESSEE	829,023	1,417,708	588,685	71%
	WISCONSIN	771,993	1,312,225	540,232	70%
	MISSISSIPPI	379,025	634,067	255,042	67%
	KENTUCKY	557,471	903,450	345,979	62%
	LOUISIANA	582,340	944,212	361,872	62%
	SOUTH DAKOTA	114,459	185,064	70,605	62%
	MASSACHUSETTS	908,565	1,463,110	554,545	61%
40–60%	ALABAMA	648,889	1,039,160	390,271	60%
	ARKANSAS	412,152	656,406	244,254	59%
	NEW JERSEY	1,231,585	1,959,545	727,960	59%
	KANSAS	375,315	593,091	217,776	58%
	MISSOURI	821,645	1,301,714	480,069	58%
	NORTH DAKOTA	97,108	152,358	55,250	57%
	RHODE ISLAND	157,358	246,507	89,149	57%
	MICHIGAN	1,334,491	2,080,725	746,234	56%
	CONNECTICUT	515,621	794,405	278,784	54%
	NEBRASKA	243,313	375,811	132,498	54%
	OKLAHOMA	494,966	757,553	262,587	53%
	INDIANA	811,290	1,231,873	420,583	52%
	ILLINOIS	1,600,863	2,412,177	811,314	51%
	OHIO	1,586,981	2,357,022	770,041	49%
	NEW YORK	2,651,655	3,916,891	1,265,236	48%
	PENNSYLVANIA	1,956,235	2,890,068	933,833	48%
	IOWA	449,887	663,186	213,299	47%
	WEST VIRGINIA	292,402	426,443	134,041	46%
	US TOTAL	40,243,713	71,453,471	31,209,758	78%

Projected Federal Spending per Medicaid Enrollee in 2024 (States Match Federal Medicaid Dollars)

AGED

$16,640

ADULTS

$4,520

CHILDREN

$2,760

"Over the 2014 to 2024 period, spending per enrollee is expected to increase at rates ranging from 4 percent for the aged to 6 percent for adults. Historically, Medicaid spending has increased at rates faster than inflation, but slower than per person increases for private health care premiums."

KAISER FAMILY FOUNDATION, MEDICAID SPENDING AND ENROLLMENT DETAIL FOR CBO'S APRIL 2014 BASELINE

Health care spending consumed five percent of the American GDP in 1960, but 17 percent in 2008. The Centers for Medicare and Medicaid services project total health care spending to grow to $4.4 trillion in 2018 and consume 20 percent of the American economy.[18]

The elderly are the primary consumers of state health care spending. If the slowing revenue scenario does in fact occur, it will coincide with a dramatic increased need for state health care spending. Increasing K-12 education populations will present additional challenges for many states.

The Medicaid program constitutes the primary arena of state spending on health care. The program operates as a joint state-federal effort based on federal matching funds (the state commits resources that the federal government matches). Despite the matching funds, Medicaid represents a major portion of state spending. In 2011, Medicaid represented 23.6 percent of state budgets.[19] The Projected Federal Spending per Medicaid Enrollee in 2024 graphic demonstrates that the elderly constitute the most expensive

Medicaid recipients, while the Census Bureau tells us millions more elderly people will soon be with us.

Medicaid serves the health needs of the poor, and the elderly have above average incomes. Many elderly people either outlive their savings or suffer larger than expected health needs. Thus even well-to-do seniors often come to rely upon Medicaid. Currently the elderly constitute a minority of Medicaid recipients, but take up a majority of Medicaid spending. Absent a substantial increase in the per-dollar productivity of health care spending or a major curtailment of eligibility, a substantial increase in the elderly population looks all but certain to place a substantial increased burden on future state budgets.

States having grown older, with slower state revenue growth and vastly increased demands for health care spending, does not constitute the best policy environment for coping with K-12 education enrollment growth. Nevertheless more children are on their way.
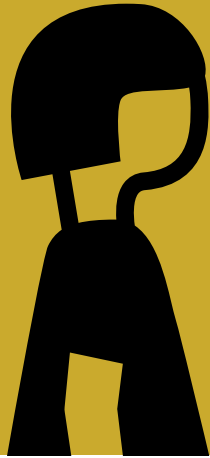
THE UPTICK:

CENSUS BUREAU PROJECTS AMERICAN YOUTH POPULATION EXPANSION

As highlighted in the previous section with the elderly population, the Census Bureau breaks down population projections by various age groupings. The aged 5-17 population grouping most closely approximates the school-aged population, while the under 18 population represents the full youth population. Both of these groupings are projected to see substantial increases by 2030, though not quite as substantial as the expected increase of the elderly, 65 and older, population.

While coming closest, the 5-17 age bracket understates the possible impact on public schools in multiple ways. For instance, many 18 year olds have yet to graduate from high school, and some students with disabilities stay until they reach the age of 22. Many states have created publicly funded preschool programs, stretching state expenses to four year olds, and in some cases younger children. Children also pay little in the way of taxes, leading economists to include the full under 18 population in their calculations of age-dependency ratios (discussed later).

The 2005 Census Interim Projection forecasts an increase in population ages 5-17 of 8.4 million and 11.3 million for ages under 18 between 2010 and 2030. The more recent Census Bureau 2012 National Population Projection forecasts that the country will gain more than 4.6 million residents age 5 to 17 and 5.4 million age under 18 during that same time period.

As discussed earlier, the 2005 Census Interim Projection is currently the only source of state-by-state data for population increase and the main source of data for this report. The difference between the two census projections likely comes from a downturn in fertility that accompanied the "Great Recession." The number of children born in the United States declined between 2008 and 2012, before ticking up in 2013.20 We ultimately cannot be sure how long the "baby recession" will last, nor can we feel certain about the direction of foreign immigration.

Regardless of which of these projections ultimately proves more accurate, millions more students will be hitting American classrooms. Given the challenges looming with the elderly, it seems safe to say that K-12 education faces huge challenges as well.

Populations Aged 5-17 By State: 2010 And Projected 2030

	State	2010 5-17 Population	2030 Projected 5-17 Population	Projected Change 2010-2030	Projected Percent Change
41%+	NEVADA	468,991	765,572	296,581	63%
	ARIZONA	1,173,056	1,844,808	671,752	57%
	FLORIDA	2,890,955	4,139,052	1,248,097	43%
31–40%	ALASKA	125,603	176,174	50,571	40%
	TEXAS	4,708,080	6,374,355	1,666,275	35%
	NORTH CAROLINA	1,623,694	2,183,119	559,425	34%
	WASHINGTON	1,061,833	1,412,399	350,566	33%
	OREGON	613,267	803,021	189,754	31%
21–30%	UTAH	578,117	741,509	163,392	28%
	GEORGIA	1,771,865	2,223,764	451,899	26%
	COLORADO	835,574	1,038,741	203,167	24%
	IDAHO	284,357	351,502	67,145	24%
	MARYLAND	994,142	1,232,853	238,711	24%
	VIRGINIA	1,344,229	1,658,902	314,673	23%
11–20%	TENNESSEE	1,066,840	1,276,249	209,409	20%
	CALIFORNIA	6,643,946	7,900,053	1,256,107	19%
	MINNESOTA	920,392	1,088,756	168,364	18%
	NEW HAMPSHIRE	221,926	261,750	39,824	18%
	ARKANSAS	507,850	562,551	54,701	11%
0–10%	DELAWARE	144,029	157,998	13,969	10%
	SOUTH CAROLINA	748,805	821,642	72,837	10%
	HAWAII	214,916	233,221	18,305	9%
	OKLAHOMA	640,391	700,929	60,538	9%
	MISSOURI	1,016,516	1,078,644	62,128	6%
	VERMONT	98,069	104,292	6,223	6%

ExcelinEd   Turn and Face the Strain: Age Demographic Change and the Near Future of American Education

Populations Aged 5-17 By State: 2010 And Projected 2030 [cont'd]

	State	2010 5-17 Population	2030 Projected 5-17 Population	Projected Change 2010-2030	Projected Percent Change
0–10%	INDIANA	1,159,571	1,223,115	63,544	5%
	WISCONSIN	951,577	999,194	47,617	5%
	NEW JERSEY	1,501,004	1,563,534	62,530	4%
	MASSACHUSETTS	1,083,149	1,115,007	31,858	3%
	NEBRASKA	318,450	329,117	10,667	3%
	ILLINOIS	2,270,256	2,326,926	56,670	2%
	KANSAS	499,462	511,861	12,399	2%
	MONTANA	152,598	155,172	2,574	2%
	RHODE ISLAND	183,080	187,296	4,216	2%
	ALABAMA	793,882	800,989	7,107	1%
	CONNECTICUT	596,296	601,076	4,780	1%
	KENTUCKY	727,254	736,599	9,345	1%
	PENNSYLVANIA	2,001,077	2,011,988	10,911	1%
	SOUTH DAKOTA	139,534	141,609	2,075	1%
–1%–-10%	LOUISIANA	833,548	819,341	-14,207	-2%
	MICHIGAN	1,805,904	1,772,535	-33,369	-2%
	NEW MEXICO	334,342	328,596	-5,746	-2%
	NEW YORK	3,170,009	3,110,440	-59,569	-2%
	MAINE	196,403	190,083	-6,320	-3%
	OHIO	1,984,331	1,907,681	-76,650	-4%
	IOWA	517,743	485,393	-32,350	-6%
	MISSISSIPPI	548,235	512,640	-35,595	-6%
	NORTH DAKOTA	103,095	93,861	-9,234	-9%
–10%+	WYOMING	83,602	74,116	-9,486	-11%
	WEST VIRGINIA	281,176	237,960	-43,216	-15%
	US TOTAL	53,005,348	61,435,403	8,430,055	16%

Elementary and secondary education stands as the largest public expense for young people. Keep in mind, states must also account for a variety of health and welfare programs with publicly funded services for young people too.

States with growing student populations face a variety of fiscal challenges in recruiting and retaining the necessary workforce and in providing the physical space to house students. The following figure presents the current spending per pupil by state that goes to capital and school debt – all money that cannot be used to hire teachers or other personnel. Not to mention, a portion of each state's school building stock will likely face retirement of its own over time.

Many states, in short, do not have enough space for their growing student populations, and this space comes at a considerable cost.

Spending per Pupil for Capital and School Debt

State / Spending Amount:

State	Amount	State	Amount	State	Amount
WY	$3,891	IL	$1,560	ME	$1,154
KS	$2,775	NY	$1,537	AL	$1,151
TX	$2,245	MD	$1,527	HI	$1,124
SC	$2,182	NV	$1,494	ID	$1,119
AK	$2,061	OR	$1,481	MA	$1,033
DE	$1,940	UT	$1,463	VA	$1,027
WA	$1,862	CA	$1,462	MT	$921
IA	$1,842	FL	$1,420	WI	$904
PA	$1,803	MO	$1,381	NH	$892
CO	$1,788	SD	$1,378	VT	$875
NM	$1,708	KY	$1,351	TN	$801
OH	$1,707	MI	$1,340	MS	$737
MN	$1,662	AZ	$1,340	OK	$701
CT	$1,648	LA	$1,321	NC	$695
AR	$1,636	GA	$1,252	RI	$599
NE	$1,616	NJ	$1,231	WV	$270
ND	$1,607	IN	$1,225		
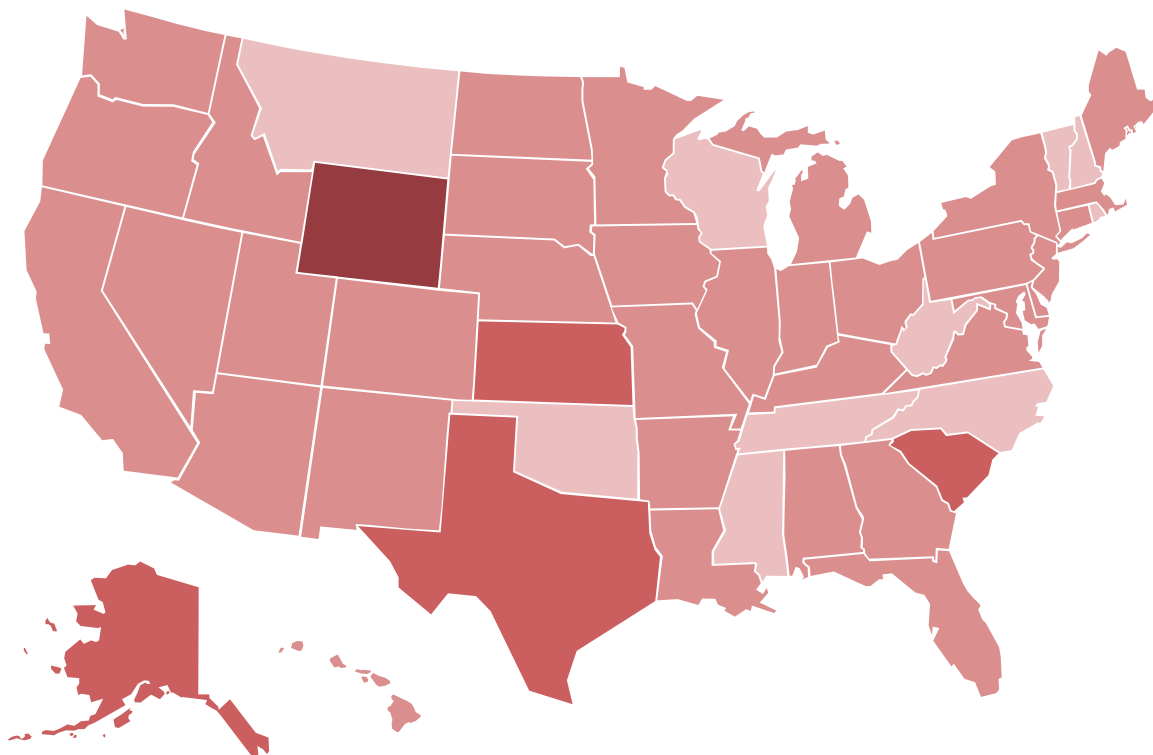
● **$0 TO $1,000** ● **$1,001 TO $2,000** ● **$1,001 TO $2,000** ● **$1,001 TO $2,000**

DIGEST OF EDUCATION STATISTICS, 2013 TABLE 236.8

American states have millions of new students on the way and currently nowhere to put them. The reader should bear this in mind the next time they hear the claim that parental choice programs "drain money" from school district budgets. Our current choice programs put only a small dent in this, even in what currently passes for the most aggressive states.
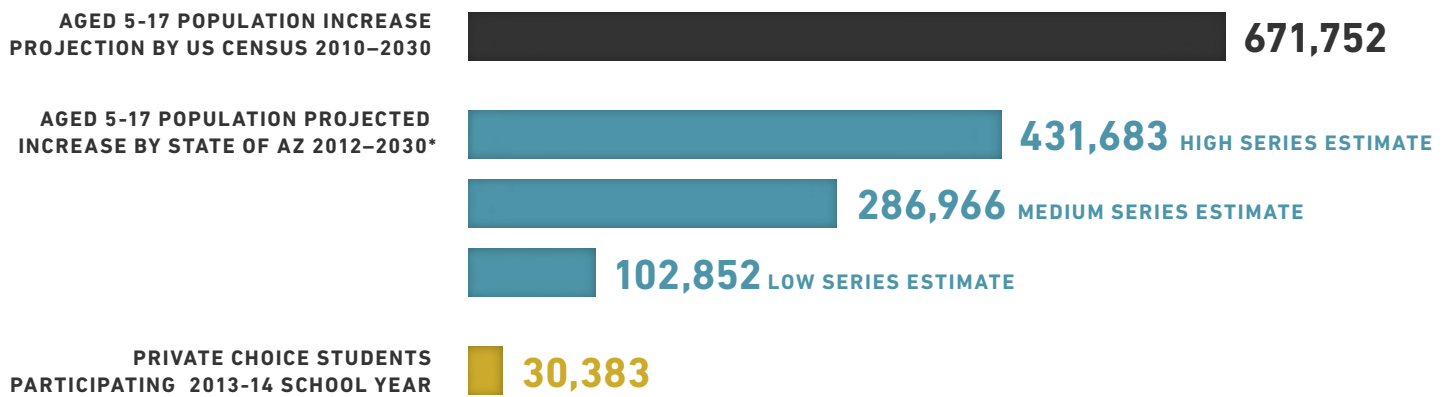
Arizona and Florida are two of the most aggressive private choice states. Private choice program enrollment in Arizona is a little more than 30,000 while Florida, the nation's highest, is approximately 86,000. In addition, they are two of the few states with detailed projections of age demographics produced by the state.

The following graphic uses more detailed statistics from Arizona makes two broad points. First, we should regard people complaining about private choice programs representing some sort of existential threat to public education as falling somewhere on the misinformed to silly spectrum. Second, as we will discuss further, the first generation private choice programs represent weak tea when contrasted against our present and future needs.

Arizona, a school choice leader, could easily multiply their private choice programs by a factor of 10 by 2030 and still experience public school enrollment growth.

Private Choice Program Students vs School-Aged Population Projection Increases in Arizona

AGED 5-17 POPULATION INCREASE PROJECTION BY US CENSUS 2010–2030	**671,752**
AGED 5-17 POPULATION PROJECTED INCREASE BY STATE OF AZ 2012–2030*	**431,683** HIGH SERIES ESTIMATE
	286,966 MEDIUM SERIES ESTIMATE
	102,852 LOW SERIES ESTIMATE
PRIVATE CHOICE STUDENTS PARTICIPATING 2013-14 SCHOOL YEAR	**30,383**

*The Arizona December 2012 Projection provides population estimates for the years 2012-2050. For consistency with the Arizona data the 2012 figures provided are used to calculate the projected population increase.

CH-CH-CHANGES:

AGE DEPENDENCY RATIOS BY STATE

All 50 states will be getting older and many states will be experiencing youth population increases. The states experiencing both will have an incredibly daunting challenge to face. The graphic on the following page draws upon data from the 2005 Census Bureau Interim Projection for the increase in both elderly and youth population increases as a method for identifying the states facing the gravest challenges in absolute terms.

A few states pop off the page – starting with Florida's projected 1.6 million youth population increase and 4 million increase in elderly residents. Note, however, that one should not get overly distracted by the absolute size of the increases – states like California, Florida and Texas will always stand out because of their huge populations.

Nevada currently has a public school population of approximately 400,000 students, and a projected increase in youth population greater than 400,000 (good luck with that, Silver State). To put these figures into proper context, we need to judge the size of the youth and elderly populations along with the size of the state's working-age population. Economists have created the concept of age dependency ratios for just this purpose.
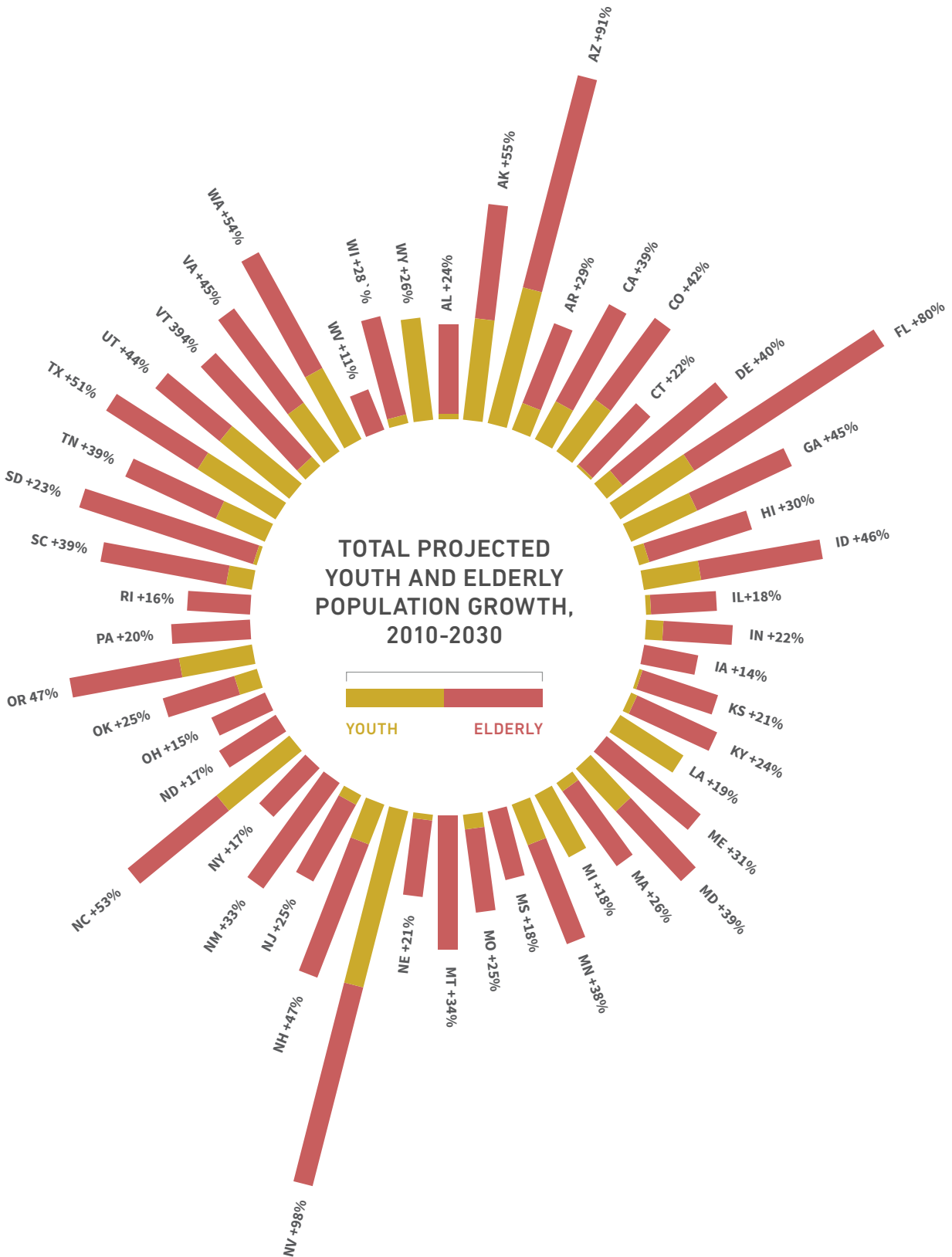
Age dependency ratios serve as a measure of societal strain. One can make the calculation itself in a straightforward fashion – you add the number of young people to the number of older people, and then divide that figure by the number of working-age people. The United States Census Bureau calculates age dependency ratios

by adding the number of people under the age of 18 to those aged 65 and older, and then divides that figure by the number of people aged 19-64. Just to make the ratio an easily understood figure, they multiply the figure by 100.[21]
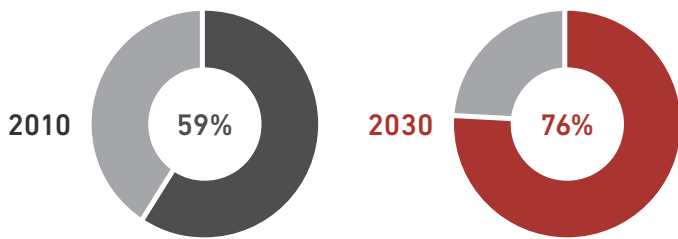
People of course change from being net beneficiaries of such services to net payers to net beneficiaries over time. The dependency ratio serves as a measure of strain on the working-age population at any given time. Your author hastens to add of course that it would be a mistake to classify everyone over the age of 65 as "dependent." There are people working well into their retirement age whom none of us would trade for an army of 23 year olds. It is likewise a mistake to think of anyone over the age of 19 as either working or a net contributor to society. Young people on six-year odysseys of self-discovery in institutions of higher education that only sometimes result in a "graduation" come readily to mind.

Broadly speaking however, economists have found dependency ratios to be predictive of economic growth. When ratios are high, you have a high percentage of people out of the work force and a relatively small percentage of people trying to cover the costs of their education, retirement and health care. Under such c ircumstances, economic growth tends to slow. Slower economic growth means fewer jobs materialize for those working-age people bearing the primary burden of maintaining the social welfare state through their taxes.

Increase in the Combined Elderly and Youth Populations by State, 2010 to 2030

AZ +91%

AK +55%

WA +54%

WI +28 %

WY +26%

AL +24%

AR +29%

CA +39%

CO +42%

FL +80%

VA +45%

VT 394%

WV +11%

CT +22%

DE +40%

GA +45%

UT +44%

HI +30%

ID +46%

TX +51%

IL+18%

IN +22%

TN +39%

IA +14%

SD +23%

KS +21%

SC +39%

KY +24%

RI +16%

LA +19%

PA +20%

OR 47%

ME +31%

OK +25%

OH +15%

ND +17%

MI +18%

MA +26%

MD +39%

NY +17%

NM +33%

NJ +25%

NE +21%

MS +18%

MO +25%

NC +53%

MT +34%

MN +38%

NH +47%

NV +98%

**TOTAL PROJECTED
YOUTH AND ELDERLY
POPULATION GROWTH,
2010–2030**

YOUTH   ELDERLY

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US Age Dependency Ratio of the United States 2010 and Projected 2030

2010 | 59%

2030 | 76%

The Congressional Budget Office explicitly projects that the aging on the baby boom population will have a negative impact on American economic growth:

CBO projects that the unemployment rate will decline only gradually over the next few years, finally dropping below 6.0 percent in 2017. Nevertheless, the labor force participation rate is projected to decline further because, according to CBO's analysis, the upward pressure on that rate from improvements in the economy will be more than offset by downward pressure from demographic trends, especially the aging of the baby-boom generation…In CBO's projections, the growth of potential GDP over the next 10 years is much slower than the average since 1950. That difference stems primarily from demographic trends that have significantly reduced the growth of the labor force.[22]

State policymakers should not hope to receive assistance from the federal government in facing the looming demographic challenge. Uncle Sam already faces serious problems of his own. Programs such as Social Security, Medicare and the Affordable Care Act all face an uncertain future. CBO Director Douglas Elmendorf recently stated that federal lawmakers face "unpleasant choices" in either cutting benefits, raising taxes or cutting back on non-entitlement spending – or some combination of the three.[23]

Broadly speaking, the age dependency ratio measures the number of people riding in the cart compared to the number pushing the cart. In 2010, the age dependency ratio of the United States stood at 59 people in the cart for every 100 pushing the cart. In 2030, the Census Bureau projects that 76 people will be riding in the cart for every 100 pushing it.

As discussed previously, the ultimate accuracy of these projections will vary and Census Bureau officials will update them over time. Note that two states with detailed updated state age demography projections (Arizona and Florida, discussed in the Appendix) have very similar projections for the age dependency ratios compared to the Census 2005 Interim Projection. Will Wyoming's age dependency ratio go from 57 percent in 2010 to exactly 84 percent in 2030? Don't expect lawmakers in Cheyenne to celebrate in 2030 if the figure turns out to be 75 percent – they will still have their hands full. A previous projection of an even larger problem will provide little to no comfort.

Age Dependency Ratio* 2010 vs 2030 by State

State	2010	2030		State	2010	2030	
NEW MEXICO	62%	93%		NEW YORK	56%	73%	
NORTH DAKOTA	58%	86%		OKLAHOMA	62%	80%	
WYOMING	57%	84%		TENNESSEE	59%	77%	
FLORIDA	63%	89%		WISCONSIN	59%	77%	
SOUTH DAKOTA	65%	91%		ARKANSAS	63%	80%	
ALASKA	52%	77%		COLORADO	55%	72%	
MONTANA	60%	85%		MARYLAND	55%	73%	
VERMONT	54%	78%		NORTH CAROLINA	58%	75%	
DELAWARE	60%	82%		GEORGIA	57%	73%	
MAINE	58%	81%		KANSAS	63%	79%	
ARIZONA	65%	87%		MINNESOTA	59%	75%	
HAWAII	58%	80%		MISSOURI	61%	77%	
NEBRASKA	63%	84%		INDIANA	61%	76%	
NEW HAMPSHIRE	55%	76%		KENTUCKY	59%	74%	
RHODE ISLAND	56%	76%		MISSISSIPPI	62%	77%	
SOUTH CAROLINA	59%	79%		OHIO	61%	76%	
MASSACHUSETTS	55%	75%		CALIFORNIA	57%	71%	
NEVADA	58%	78%		ILLINOIS	59%	73%	
ALABAMA	60%	79%		NEW JERSEY	59%	73%	
CONNECTICUT	59%	78%		TEXAS	60%	74%	
LOUISIANA	59%	77%		MICHIGAN	60%	73%	
PENNSYLVANIA	60%	79%		OREGON	58%	71%	
VIRGINIA	55%	74%		WASHINGTON	56%	69%	
WEST VIRGINIA	59%	78%		IDAHO	66%	75%	
IOWA	63%	81%		UTAH	68%	77%	

*The age dependency ratio is derived by dividing the combined under 18 and 65-and-over populations by the 18-to-64 population and multiplying by 100.

The state with the lowest age dependency ratio in 2030 (Washington with 69%) is higher than the state with the highest ratio in 2010 (Utah with 68%). All other states will be moving into unprecedented territory – with several states reaching into the 80-90 range. The overall picture here is clear enough to raise concern: age dependency ratios will be increasing substantially in all 50 states.
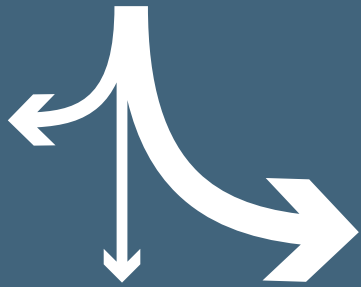
RESOURCE MANAGEMENT:

A MIND IS A TERRIBLE THING TO WASTE IN THE FIGHT FOR THE FUTURE

The age dependency ratio formulation makes justifiable but broad assumptions about people based on their age. For instance, youth don't generate much tax revenue and carry major public expenses when they draw upon public education and health programs. Economists can justify including people aged 65 and older in the ratio due to the fact that most of this age cohort withdraws from the workforce, and becomes eligible for public assistance programs. Of course this is not true for every individual as some people continue working well past retirement age.
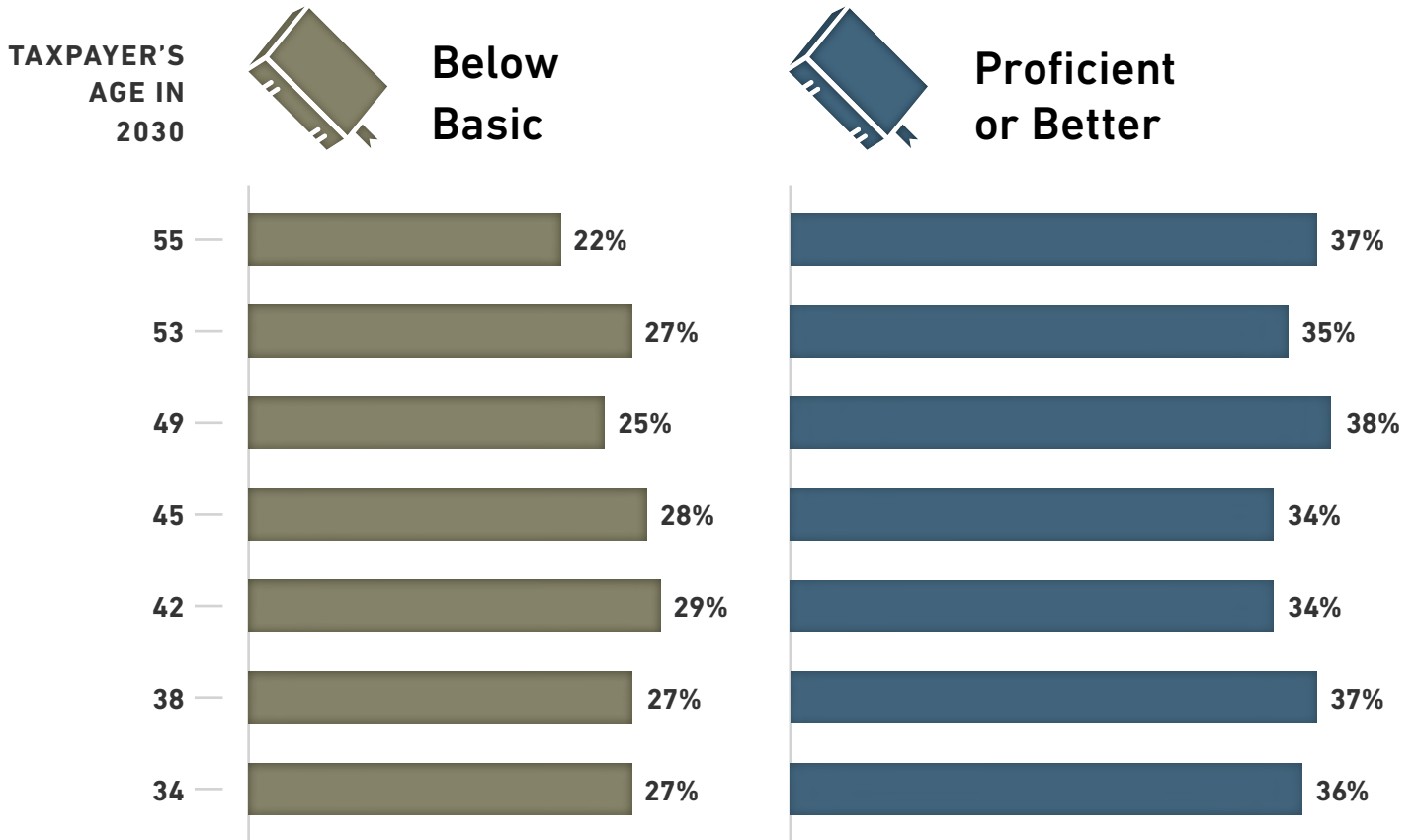
The age dependency ratio also broadly assumes that working-age people will be actually working. The National Assessment of Educational Progress has information about the literacy skills of 12th-grade students going back to 1992. The NAEP data reveals that a disturbingly large percentage of 12th graders lacked basic literacy skills in 12th grade – and that this problem worsened between 1992 and 2013. These cohorts will approximately fall between the ages of 34 and 55 in 2030 – and approximately 25 percent of them lacked a basic reading ability as 17 year olds. If we were able to include dropouts in these figures (dropouts are not present to take a 12th grade NAEP test), we would move above the 25 percent figure.

For the sake of clarity, American academic achievement has trended relatively flat for decades despite substantially higher per student spending. What has changed is the scale of the challenge facing students as they move into the workforce. Previous generations did not face fierce global economic competition and huge societal burdens, but the students in the school system now will face both of these things.[25]

The public will have paid for 13 years of public school spending for these middle-aged taxpayers of 2030. *The United States of 2030 would have been greatly aided if half or more of these students had graduated with full proficiency in reading. But for better or worse, you go to war with the army you have, not the one you would have liked.* We still have some time to improve the

Taxpayers of 2030 by Approximate Age in 2030 with Average 12th Grade NAEP Reading Performance

12TH GRADE NAEP READING PERFORMANCE

TAXPAYER'S AGE IN 2030	Below Basic	Proficient or Better
55	22%	37%
53	27%	35%
49	25%	38%
45	28%	34%
42	29%	34%
38	27%	37%
34	27%	36%

situation in 2030 with improved K-12 education and higher education outcomes, but we are watching the window close.

The main burden of maintaining public systems of health care, education and old age retirement seems likely to fall upon an alarmingly small group: the 36 percent or so of American high-school graduates who left school able to read proficiently. These people prove to be greatly over-represented in a number of favorable categories: attending and graduating from university, securing high-paying jobs, completing advanced graduation and training and more. Amazing technological breakthroughs and innovations are to come in the years ahead, and these academically well-equipped people will again be at the forefront of making them.

Will a well-educated third be able to cope with the challenge ahead? Only time will tell, but we could all breathe easier if something amazing like half of American high school graduates of the 1992 to 2013 era read proficiently.

Discussion over income inequality should focus on the fact that 64 percent of American students fail to read proficiently after 13 years in one of the most expensive school systems in the world.

FACING THE MUSIC:

WHAT CAN POLICYMAKERS DO NOW?

If this were a movie, our heroes would focus their efforts on saving the day for the America of 2030 at the last possible moment. Alas this is not a movie, and dramatic improvement of the sort needed will require hard work. While some state efforts to improve academic transparency and accountability have succeeded in improving outcomes. States such as Florida and Massachusetts for instance have seen laudable gains, especially among disadvantaged students groups, through a focus on academic standards, transparency and the expansion of parental choice mechanisms. The typical effort from the average state makes for a weak intervention in the face of the need to improve outcomes while lowering costs, and placed against the looming age demographic changes, even the reform efforts of the most successful states may constitute at best a good start.

Common sense and an appropriate level of humility leads one quickly to the conclusion that no single policy reform alone seems likely to set American education on a virtuous cycle of climbing outcomes and declining costs. Policymakers should therefore pursue multiple policy reforms with plausible theories of improvement backed by solid empirical evidence.

Some analysts have asserted for instance that educators could substantially improve outcomes by identifying the weakest instructors and replacing them with instructors of average or better effectiveness.[26] Our ability to carry out such a reform in practice, however, remains either unfulfilled or undocumented at this point. Far bolder moves on this front will be needed.

Educators around the nation have begun the process of experimenting with digital and blended learning in an effort to improve outcomes and (potentially) lower costs. Such experiments may provide a path to allow high-quality instructors to educate greater numbers of students to higher levels of achievement. A decentralized system of experimentation and learning with "flipped" classrooms (students watching lectures at home and working problems in class) and blended learning (a mixture of technology and face to face learning) may provide a path forward to improve outcomes and lower costs.

Another area for policy experimentation lies in the area of incentive funding. A number of analysts have noted that the method of funding schools today essentially funds "seat time" rather than student success. In essence, we fund schools based upon enrollment rather than learning, and our examinations of academic outcomes reveal far more students have attended school than those who demonstrate academic proficiency.

The clock continues to tick, meaning that if reformers are going to demonstrate substantial success at scale with such reforms, and a variety of unnamed others, they should be pursued vigorously. The time for timid experiments fades as the need for strong results continues to rise.

Difference in Achievement in NAEP Scale Points
per $1,000 invested for Charter and District Schools
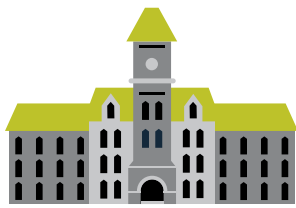
Charter Schools
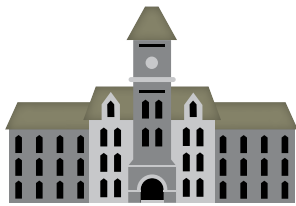
District Schools

MATH ACHIEVEMENT

60

43

READING ACHIEVEMENT

56

39

THE PRODUCTIVITY OF PUBLIC CHARTER SCHOOLS, ALBERT CHENG, JAY F. MAY, LARRY MALONEY, MEAGAN BATDORFF, PATRICK J. WOLF, SHEREE SPEAKMAN, JULY 2014

The reality to face is that the American K-12 education system largely squandered a gigantic increase in per-pupil spending from the mid-20th century until the present day – a terrible waste of human potential that will in all likelihood cost us dearly in the years ahead. Future Americans will likely never know the unquantifiable scale of this lost potential, but may suffer from an acute bewilderment as to what went wrong.[27]

Schools almost certainly face a prolonged era of reduced spending per pupil. In a sign of things to come, the Census Bureau found that public school spending per pupil declined in 2012, for the first time since records have been kept.[28] We have ample reason to suspect that the current level of spending in the K-12 education system will prove unsustainable. We also have an urgent need to improve outcomes. Where does this leave us?

Every state constitution guarantees public funding for K-12 education and opinion polls consistently reveal strong support for education spending. Public education isn't going anywhere, but it will face competition for public dollars in an unprecedented fashion. Public education is here to stay, but there is nothing to guarantee that it won't become even less effective than it is today.

A system that can't successfully improve student achievement during decades of steady funding increases inspires little confidence in managing an era of austerity.

No one should presume to know with certainty the best mix of reforms for every state to pursue –merely that today's results will prove inadequate. We can feel confident that the best process for discovering education practices of truly revolutionary scope lies in the decentralized process of allowing educators and parents to try new approaches. State government policies, if skillfully employed, can incentivize higher levels of achievement and discourage abject failure. "We've squeezed everything we can out of a system that was designed a century ago," Marc Tucker, vice chairman of the New Commission on the Skills of the American Workforce told the Christian Science Monitor in 2006. "We've not only put in lots more money and not gotten significantly better results, we've also tried every program we can think of and not gotten significantly better results at scale. This is the sign of a system that has reached its limits." Jack Jennings echoed this sentiment in the same article "I think we've tried to do what we can to improve American schools within the current context. Now we need to think much more daringly."[29]

Like it or not, the demands for public dollars look set to soar, while their supply faces constraints. We must therefore look to improve the marginal productivity of each dollar spent. Fortunately, American policymakers have taken small, experimental steps toward improving the return on investment in education spending. *The first national study of the relative academic and financial productivity of district and charter schools for instance found evidence of significantly greater academic return on investment in charter schools.[30]*

We do not yet have a similar study of the return on investment of private choice programs, but we can surmise that it would score more impressive still than the above charter school calculation. Per pupil funding levels for private choice programs fall far below those of either district or charter schools. Moreover, the highest quality random assignment evidence on academic outcomes for private school choice programs is more consistently positive than a very limited but growing pool of such charter school studies.[31]

The charter school and school voucher policies of the previous decades represent crucial proof points in demonstrating the ability to improve the return on investment of education spending. One should not underestimate the importance of this in light of what amounted to a collapse in productivity in the districts as spending raced ahead far faster than academic improvement. However, after more than two decades of practice, charter schools have claimed approximately five percent of the public school market share. On the private choice side, while we have seen the recent advent of state programs with broad funded eligibility, these programs remain modest in scope overall. In the face of the coming storm, one can only view our current choice policies as important first steps that remain completely inadequate.

Fortunately bolder policies have emerged in recent years, specifically second-generation versions of charter and voucher policies. Collectively these policies represent "School Choice 2.0," and we need to be exploring the boundaries of their potential vigorously. If we want to discover whether innovative educators can successfully harness the potential of technology while keeping the human touch, for instance, we need to set educators and parents free to innovate. At the moment, we do not have the solutions and can do little more than guess at them. Second generation choice programs, far bolder than those in the past, can create a powerful decentralized learning process.

TURBOCHARGING CHARTER SCHOOLING: RECOVERY SCHOOL DISTRICTS

Charter schools have displayed the ability to return higher levels of return on investment than district schools and reduced the need for district facility spending on new buildings. As of the 2011-12 school year however, charter enrollment had only broken through the 10 percent threshold in a single state – Arizona.[32]

By now, the number of charter schools nationwide has surpassed 6,000. Total charter school enrollment passed the 2 million mark during the 2011-12 school year, and thus will be driving toward 3 million somewhere around 2018 at the current pace.

We should understand this progress as real and laudable. It takes the selfless dedication of educators and philanthropists to generate this rate of progress. In more normal times, we might have the luxury of time to throw our full effort into continuing this slow, steady process of new school creation.

Fate, however, has conspired not to grant us the luxury of time. The success of charter schools raises fundamental questions which cannot be avoided in the coming age of financial austerity. Questions like: why did teachers make up 70 percent of total public school employees in 1950 but only 50.5 percent in 2011?[33] More fundamentally: with 6,000 public schools collectively delivering higher return on investment while operating without a school district administration, isn't it time to rework the school district model itself?

The Recovery School District (RSD) model emerged in the aftermath of Hurricane Katrina. Policymakers recognized that the New Orleans school district had been an academic disaster for far too many children long before the physical disaster of the hurricane. In rebuilding the system, the RSD sought proposals from charter school management organizations to operate schools during fixed terms with specific academic goals. Schools failing to meet these goals find themselves replaced by new teams drawn by the lure of operating a charter school with a much lowered financial facility burden.

The academic results of the RSD have been very impressive. In 2013, the RSD's standardized test scores in New Orleans schools grew faster than any other public school system in Louisiana.[34] During the 2008-2013 period, the percentage of RSD students scoring proficient on state exams more than doubled, from 28 percent in 2008 to 57 percent in 2013. This rate of improvement more than tripled the rate of statewide improvement.[35] Louisiana will need each and every well-educated resident it can muster as it copes with the aging of its population, so the RSD's academic improvement should be most welcome.

In our search for improved productivity, we need to view school buildings as huge educational assets, often poorly utilized by districts. Additionally high-spending and low-performing schools are a luxury neither taxpayers nor students cannot afford.

While public spending on K-12 education is here to stay, the district model of schooling faces a badly needed reboot. High spending, low performance and apathetic voter turnout in school elections has represented a formula for academic stagnation. The RSD model suggests a way forward in improving productivity within a public school context. Other models from overseas, including experiments in the self-governance of schools with governing boards of parents with students in attendance and competition for students also merit consideration and study. *Bottom line: the school district may have a future but badly needs a serious upgrade.*

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PARENTAL CHOICE 2.0:
OPTIMIZING EDUCATION THROUGH VOLUNTARY EXCHANGE

</div>

Private choice programs also face considerable obstacles to providing broad improvement in student outcomes. Programs effectively designed to facilitate a student transfer to empty spaces in a preexisting stock of private schools currently dominate the private choice landscape. These programs have drawn the strong evaluations noted above, but in terms of the needed scale they represent only an incremental step. *We need our policymakers to be much more daring.*

Unless a choice program has been designed well enough to create the incentive to create new school seats (helping to cope with the coming enrollment increase) we should view them only as a life-vest on the Titanic: much better than nothing, far less than ideal.

The innovation on the private choice program has arrived in the form of account based choice programs or Education Savings Accounts (ESAs). State lawmakers have created two such programs in recent years – the first in Arizona (beginning in 2011) and the second in Florida (passed in 2014). Both represent pilot programs proving out the concept of a parentally managed account financing mechanism to deliver education.

The ESA model has several advantages of the traditional school voucher mechanism. First, it proved more robust to court challenge in Arizona than previous voucher programs. The Arizona Empowerment Scholarship Accounts program survived a legal challenge whereas two previous voucher programs had been ruled unconstitutional under Arizona's Blaine amendment. It is possible that an ESA program might have a similar advantage under other state constitutions.

The ESA model also provides a far greater level of flexibility to parents than a voucher. Parents use vouchers to choose between schools, and they broaden their possible choices to participating private schools. *ESA programs give parents choices not just between schools, but also between methods of education.* Parents can choose to enroll in a school full time, but they also have other options – including the hiring of private tutors and therapists, online education programs and even the purchasing of individual classes at schools or community colleges.

Critically, the ESA model allows parents to save money for future higher education expenses. This creates the incentive for parents to carefully select between providers based not only upon perceived quality, but also cost. Providers thereby face the incentive to provide high-quality services at affordable prices – the exact opposite trend seen in the district system in which spending surged and outcomes largely stagnated.

While rightly known as the father of school vouchers, Milton Friedman anticipated this development in a column written late in his illustrious career.[36] Consideration of an extensive quote is quite rewarding. In 1995, Dr. Friedman wrote in the pages of the Washington Post:

Vouchers are not an end in themselves. The purpose of vouchers is to enable parents to have free choice, and the purpose of having free choice is to provide competition and allow the educational industry to get out of the 17th century and get into the 21st century.

Why not add partial vouchers? Why not let (parents) spend part of a voucher for math in one place and English or science somewhere else.

No one can predict in advance the direction that a truly free market educational system would take. We know from the experience of every other industry how imaginative competitive free enterprise can be, what new products and services can be introduced how driven it is to satisfy the customers — that is what we need in education. We know how the telephone industry has been revolutionized by opening it to competition; how fax has begun to *undermine the postal monopoly in first-class mail; how UPS, Federal Express and many other private enterprises have transformed package and message delivery and, on the strictly private level, how competition from Japan has transformed the domestic automobile industry.*

The private schools that 10 percent of children now attend consist of a few elite schools serving at high cost a tiny fraction of the population, and many mostly parochial nonprofit schools able to compete with government schools by charging low fees made possible by the dedicated services of many of the teachers and subsidies from the sponsoring institutions. These private schools do provide a superior education for a small fraction of the children, but they are not in a position to make innovative changes. For that, we need a much larger and more vigorous private enterprise system.[37]
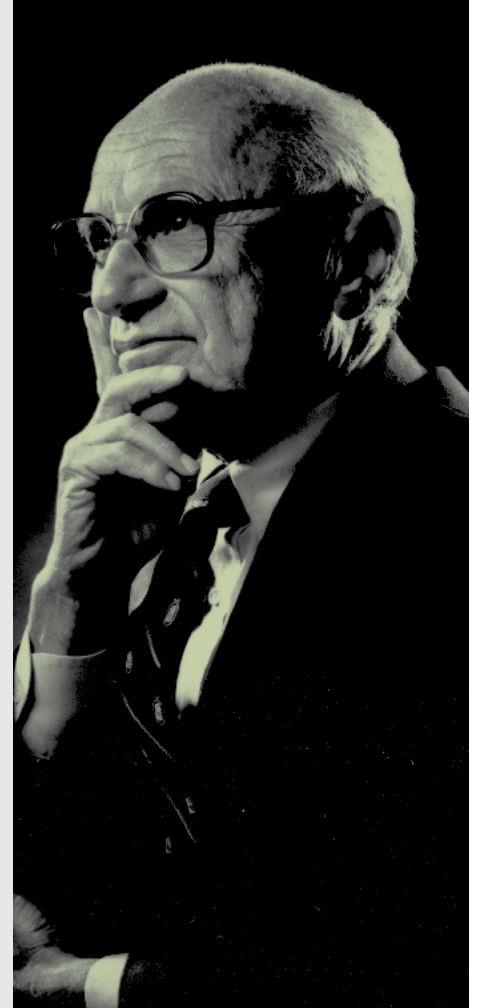
What Friedman termed "partial vouchers" policymakers brought to life in the form of Education Savings Accounts 16 years after his column. Dr. Friedman's observations regarding the private school market ring truer today than given the context of the looming crisis: the preexisting stock of private schools can and will be part of the solution, but only part. We need to develop of system of choice which draws in new players: new private schools, institutions of higher education, private tutoring and therapists, blended and online education programs and perhaps methods we cannot currently imagine into the K-12 education space.[38]

Any attempt by policymakers to centrally plan such a process would inevitably prove inevitably clumsy at best. Policymakers should put parents in charge of it with proper incentives for seeking the highest possible value and strong guardrails against the misuse of funds. From there parents could create customized education plans designed to meet the individual child's needs while making the best possible use of funds.
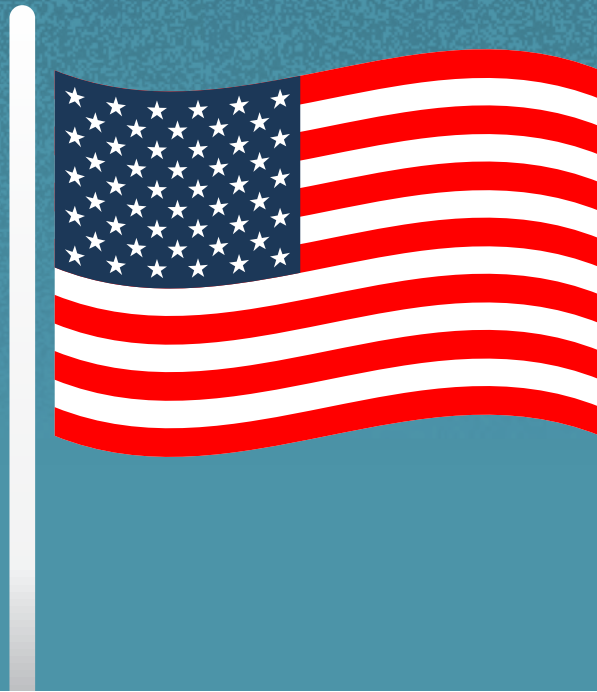
CONCLUSION: ADAPTING FOR SUCCESS IN THE NEXT AMERICA

A demographic vise will steadily tighten on state budgets in the years ahead. The last 50 years involved a large and steady increase in spending and employment in the American K-12 education system with a far more modest improvement in student learning. *American public school grew ever more expensive, employed ever more adults per child, but failed to substantially improve student learning. We cannot sustain the current level of spending, meaning that the only path open to us will be to increase the return on each dollar spent.*

We can say with complete confidence: geographic monopolies run by government entities with low voter turnout and highly organized employee interests will seldom serve as the incubators of effectiveness, innovation or efficiency.

This is not to say that public education is going away, just that this form of public education has grown badly outdated to suit our current and future needs. If we meet the crisis of our near future by simply cutting the budgets for what already represents a fundamentally broken system, merely hoping for the best, disaster looms.

School districts failed to substantially improve student learning during decades of steady funding level increases that were the envy of the world. Only a Panglossian level of optimism would imagine the same system skillfully cutting their budgets while greatly improving outcomes. That is an entirely different task requiring new methods and tools.

With entirely appropriate humility, we should recognize that we do not know the best ways to organize education now, much less 50 years from now. We can however feel certain that a

decentralized system of schooling with parents in control and making choices considering the full opportunity cost of spending will result in both improvement and efficiency.

This is par for the course in most every other human activity. A system of voluntary exchange whereby parents extract the highest possible value from education funding with full consideration of opportunity costs can improve both performance and return on investment.

As the *Economist* magazine noted, greater independence has shown the ability to improve academic outcomes without additional cost. Our attempt to spend our way to high-quality schools broadly disappointed but persisted for a long time. We should grant independence to schools, but not stop there. We should give almost complete control of education to parents and allow them to voluntarily contract with schools and other service providers. Assuming that demographic imperatives force us to economize in our K-12 education system, ask yourself who you want to have in charge of that process: distant policymakers and faceless administrators or parents themselves?

Our ability to throw money at schools and hope for the best seems set to run out before our willingness to do so. In the end, the result will remain the same: the status-quo does not represent a viable option. Many wrenching changes lie ahead in American politics, both within education and outside of it. We have the opportunity for a grand bargain offering parents greater flexibility and control along with the inevitable need for less spending. If we set them free and put them in charge, parents just might amaze us with their transformation of education.

NOTES

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12.   At the time of this writing, the author was able to locate state projections for a larger elderly population in Ala., Alas., Ark., Calif., Hawaii, Ind., Md., Mo., N.H., N.C., Ohio, Oreg., R.I., Tenn., Utah, and Wash. Smaller estimates of the elderly population among the available state estimates were found for La., Maine, Minn., Mont., N.Y., W.Va., and Wyo. Ibid.

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25.   See for instance Larry Summers, "Bold reform is the only answer to secular stagnation," article appearing in *The Financial Times,* Sept. 7, 2014, accessed (Oct. 2014), http://www.ft.com/intl/cms/s/2/4be87390-352a-11e4-aa47-00144feabdc0.html#axzz3HTPtCUE4

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APPENDIX

Populations Aged 65 and Older By State: 2010 And Projected 2030

State	2010 65+ Population	2030 Projected 65+ Population	Projected Change 2010–2030	Projected Percent Change
ALABAMA	648,889	1,039,160	390,271	60%
ALASKA	56,548	127,202	70,654	125%
ARIZONA	922,010	2,371,354	1,449,344	157%
ARKANSAS	412,152	656,406	244,254	59%
CALIFORNIA	4,392,708	8,288,241	3,895,533	89%
COLORADO	517,419	956,278	438,859	85%
CONNECTICUT	515,621	794,405	278,784	54%
DELAWARE	124,972	237,823	112,851	90%
FLORIDA	3,418,697	7,769,452	4,350,755	127%
GEORGIA	980,824	1,907,837	927,013	95%
HAWAII	191,065	326,957	135,892	71%
IDAHO	181,416	361,033	179,617	99%
ILLINOIS	1,600,863	2,412,177	811,314	51%
INDIANA	811,290	1,231,873	420,583	52%
IOWA	449,887	663,186	213,299	47%
KANSAS	375,315	593,091	217,776	58%
KENTUCKY	557,471	903,450	345,979	62%
LOUISIANA	582,340	944,212	361,872	62%
MAINE	212,278	374,017	161,739	76%
MARYLAND	717,987	1,235,695	517,708	72%
MASSACHUSETTS	908,565	1,463,110	554,545	61%
MICHIGAN	1,334,491	2,080,725	746,234	56%
MINNESOTA	670,429	1,193,124	522,695	78%
MISSISSIPPI	379,025	634,067	255,042	67%
MISSOURI	821,645	1,301,714	480,069	58%

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Populations Aged 65 and Older By State: 2010 And Projected 2030 [cont'd]

State	2010 65+ Population	2030 Projected 65+ Population	Projected Change 2010-2030	Projected Percent Change
MONTANA	144,961	269,558	124,597	86%
NEBRASKA	243,313	375,811	132,498	54%
NEVADA	329,621	797,179	467,558	142%
NEW HAMPSHIRE	178,823	352,786	173,963	97%
NEW JERSEY	1,231,585	1,959,545	727,960	59%
NEW MEXICO	278,967	555,184	276,217	99%
NEW YORK	2,651,655	3,916,891	1,265,236	48%
NORTH CAROLINA	1,161,164	2,173,173	1,012,009	87%
NORTH DAKOTA	97,108	152,358	55,250	57%
OHIO	1,586,981	2,357,022	770,041	49%
OKLAHOMA	494,966	757,553	262,587	53%
OREGON	494,328	881,957	387,629	78%
PENNSYLVANIA	1,956,235	2,890,068	933,833	48%
RHODE ISLAND	157,358	246,507	89,149	57%
SOUTH CAROLINA	605,660	1,134,459	528,799	87%
SOUTH DAKOTA	114,459	185,064	70,605	62%
TENNESSEE	829,023	1,417,708	588,685	71%
TEXAS	2,587,383	5,186,185	2,598,802	100%
UTAH	234,798	460,553	225,755	96%
VERMONT	93,442	173,940	80,498	86%
VIRGINIA	994,359	1,843,988	849,629	85%
WASHINGTON	795,528	1,563,901	768,373	97%
WEST VIRGINIA	292,402	426,443	134,041	46%
WISCONSIN	771,993	1,312,225	540,232	70%
WYOMING	72,658	138,586	65,928	91%
US TOTAL	40,243,713	71,453,471	31,209,758	**78%**

Populations Under 18 By State: 2010 And Projected 2030

State	2010 Under 18 Population	2030 Projected Under 18 Population	Projected Change 2010-2030	Projected Percent Change
ALABAMA	1,092,184	1,112,264	20,080	2%
ALASKA	183,983	249,293	65,310	35%
ARIZONA	1,688,464	2,607,152	918,688	54%
ARKANSAS	702,656	783,223	80,567	11%
CALIFORNIA	9,496,978	11,046,140	1,549,162	16%
COLORADO	1,188,583	1,464,836	276,253	23%
CONNECTICUT	814,008	823,436	9,428	1%
DELAWARE	202,208	218,760	16,552	8%
FLORIDA	4,086,123	5,770,082	1,683,959	41%
GEORGIA	2,502,386	3,146,624	644,238	26%
HAWAII	316,263	325,503	9,240	3%
IDAHO	400,237	486,088	85,851	21%
ILLINOIS	3,196,906	3,259,113	62,207	2%
INDIANA	1,596,185	1,701,424	105,239	7%
IOWA	711,056	663,301	-47,755	-7%
KANSAS	698,996	708,946	9,950	1%
KENTUCKY	1,002,307	1,027,976	25,669	3%
LOUISIANA	1,171,502	1,149,939	-21,563	-2%
MAINE	269,232	255,393	-13,839	-5%
MARYLAND	1,406,294	1,718,368	312,074	22%
MASSACHUSETTS	1,483,853	1,545,614	61,761	4%
MICHIGAN	2,487,058	2,433,329	-53,729	-2%
MINNESOTA	1,289,963	1,505,527	215,564	17%
MISSISSIPPI	759,450	712,022	-47,428	-6%
MISSOURI	1,411,394	1,497,099	85,705	6%
MONTANA	212,312	210,342	-1,970	-1%

Populations Under 18 By State: 2010 And Projected 2030 [cont'd]

State	2010 Under 18 Population	2030 Projected Under 18 Population	Projected Change 2010-2030	Projected Percent Change
NEBRASKA	446,256	456,338	10,082	2%
NEVADA	665,085	1,075,633	410,548	62%
NEW HAMPSHIRE	304,164	355,531	51,367	17%
NEW JERSEY	2,088,224	2,175,752	87,528	4%
NEW MEXICO	479,405	455,808	-23,597	-5%
NEW YORK	4,420,876	4,325,477	-95,399	-2%
NORTH CAROLINA	2,268,838	3,080,611	811,773	36%
NORTH DAKOTA	141,964	128,313	-13,651	-10%
OHIO	2,744,431	2,640,671	-103,760	-4%
OKLAHOMA	895,073	977,929	82,856	9%
OREGON	863,166	1,118,070	254,904	30%
PENNSYLVANIA	2,747,595	2,746,199	-1,396	0%
RHODE ISLAND	249,273	252,731	3,458	1%
SOUTH CAROLINA	1,036,349	1,143,807	107,458	10%
SOUTH DAKOTA	194,152	195,896	1,744	1%
TENNESSEE	1,478,915	1,791,281	312,366	21%
TEXAS	6,785,408	8,990,095	2,204,687	32%
UTAH	818,985	1,060,166	241,181	29%
VERMONT	132,372	138,959	6,587	5%
VIRGINIA	1,880,184	2,320,190	440,006	23%
WASHINGTON	1,488,423	1,964,633	476,210	32%
WEST VIRGINIA	382,311	325,351	-56,960	-15%
WISCONSIN	1,319,144	1,365,476	46,332	4%
WYOMING	116,273	99,997	-16,276	-14%
US TOTAL	74,431,511	85,707,297	11,275,786	15%

Combined Under 18 and 65+ Population by State: 2010 And Projected 2030

State	2010 Combined Under 18 and 65+ Population	2030 Projected Combined Under 18 and 65+ Population	Projected Change 2010–2030	Projected Percent Change
ALABAMA	1,741,073	2,151,424	410,351	24%
ALASKA	240,531	376,495	135,964	57%
ARIZONA	2,610,474	4,978,506	2,368,032	91%
ARKANSAS	1,114,808	1,439,629	324,821	29%
CALIFORNIA	13,889,686	19,334,381	5,444,695	39%
COLORADO	1,706,002	2,421,114	715,112	42%
CONNECTICUT	1,329,629	1,617,841	288,212	22%
DELAWARE	327,180	456,583	129,403	40%
FLORIDA	7,504,820	13,539,534	6,034,714	80%
GEORGIA	3,483,210	5,054,461	1,571,251	45%
HAWAII	507,328	652,460	145,132	29%
IDAHO	581,653	847,121	265,468	46%
ILLINOIS	4,797,769	5,671,290	873,521	18%
INDIANA	2,407,475	2,933,297	525,822	22%
IOWA	1,160,943	1,326,487	165,544	14%
KANSAS	1,074,311	1,302,037	227,726	21%
KENTUCKY	1,559,778	1,931,426	371,648	24%
LOUISIANA	1,753,842	2,094,151	340,309	19%
MAINE	481,510	629,410	147,900	31%
MARYLAND	2,124,281	2,954,063	829,782	39%
MASSACHUSETTS	2,392,418	3,008,724	616,306	26%
MICHIGAN	3,821,549	4,514,054	692,505	18%
MINNESOTA	1,960,392	2,698,651	738,259	38%
MISSISSIPPI	1,138,475	1,346,089	207,614	18%
MISSOURI	2,233,039	2,798,813	565,774	25%
MONTANA	357,273	479,900	122,627	34%

Appendix

Combined Under 18 and 65+ Population by State: 2010 And Projected 2030 [cont'd]

State	2010 Combined Under 18 and 65+ Population	2030 Projected Combined Under 18 and 65+ Population	Projected Change 2010–2030	Projected Percent Change
NEBRASKA	689,569	832,149	142,580	21%
NEVADA	994,706	1,872,812	878,106	88%
NEW HAMPSHIRE	482,987	708,317	225,330	47%
NEW JERSEY	3,319,809	4,135,297	815,488	25%
NEW MEXICO	758,372	1,010,992	252,620	33%
NEW YORK	7,072,531	8,242,368	1,169,837	17%
NORTH CAROLINA	3,430,002	5,253,784	1,823,782	53%
NORTH DAKOTA	239,072	280,671	41,599	17%
OHIO	4,331,412	4,997,693	666,281	15%
OKLAHOMA	1,390,039	1,735,482	345,443	25%
OREGON	1,357,494	2,000,027	642,533	47%
PENNSYLVANIA	4,703,830	5,636,267	932,437	20%
RHODE ISLAND	406,631	499,238	92,607	23%
SOUTH CAROLINA	1,642,009	2,278,266	636,257	39%
SOUTH DAKOTA	308,611	380,960	72,349	23%
TENNESSEE	2,307,938	3,208,989	901,051	39%
TEXAS	9,372,791	14,176,280	4,803,489	51%
UTAH	1,053,783	1,520,719	466,936	44%
VERMONT	225,814	312,899	87,085	39%
VIRGINIA	2,874,543	4,164,178	1,289,635	45%
WASHINGTON	2,283,951	3,528,534	1,244,583	54%
WEST VIRGINIA	674,713	751,794	77,081	11%
WISCONSIN	2,091,137	2,677,701	586,564	28%
WYOMING	188,931	238,583	49,652	26%
US TOTAL	114,675,224	157,160,768	42,485,544	37%

Populations Aged 5-17 By State: 2010 And Projected 2030

State	2010 5-17 Population	2030 Projected 5-17 Population	Projected Change 2010-2030	Projected Percent Change
ALABAMA	793,882	800,989	7,107	1%
ALASKA	125,603	176,174	50,571	40%
ARIZONA	1,173,056	1,844,808	671,752	57%
ARKANSAS	507,850	562,551	54,701	11%
CALIFORNIA	6,643,946	7,900,053	1,256,107	19%
COLORADO	835,574	1,038,741	203,167	24%
CONNECTICUT	596,296	601,076	4,780	1%
DELAWARE	144,029	157,998	13,969	10%
FLORIDA	2,890,955	4,139,052	1,248,097	43%
GEORGIA	1,771,865	2,223,764	451,899	26%
HAWAII	214,916	233,221	18,305	9%
IDAHO	284,357	351,502	67,145	24%
ILLINOIS	2,270,256	2,326,926	56,670	2%
INDIANA	1,159,571	1,223,115	63,544	5%
IOWA	517,743	485,393	-32,350	-6%
KANSAS	499,462	511,861	12,399	2%
KENTUCKY	727,254	736,599	9,345	1%
LOUISIANA	833,548	819,341	-14,207	-2%
MAINE	196,403	190,083	-6,320	-3%
MARYLAND	994,142	1,232,853	238,711	24%
MASSACHUSETTS	1,083,149	1,115,007	31,858	3%
MICHIGAN	1,805,904	1,772,535	-33,369	-2%
MINNESOTA	920,392	1,088,756	168,364	18%
MISSISSIPPI	548,235	512,640	-35,595	-6%
MISSOURI	1,016,516	1,078,644	62,128	6%
MONTANA	152,598	155,172	2,574	2%

Populations Aged 5-17 By State: 2010 And Projected 2030 [cont'd]

State	2010 5-17 Population	2030 Projected 5-17 Population	Projected Change 2010-2030	Projected Percent Change
NEBRASKA	318,450	329,117	10,667	3%
NEVADA	468,991	765,572	296,581	63%
NEW HAMPSHIRE	221,926	261,750	39,824	18%
NEW JERSEY	1,501,004	1,563,534	62,530	4%
NEW MEXICO	334,342	328,596	-5,746	-2%
NEW YORK	3,170,009	3,110,440	-59,569	-2%
NORTH CAROLINA	1,623,694	2,183,119	559,425	34%
NORTH DAKOTA	103,095	93,861	-9,234	-9%
OHIO	1,984,331	1,907,681	-76,650	-4%
OKLAHOMA	640,391	700,929	60,538	9%
OREGON	613,267	803,021	189,754	31%
PENNSYLVANIA	2,001,077	2,011,988	10,911	1%
RHODE ISLAND	183,080	187,296	4,216	2%
SOUTH CAROLINA	748,805	821,642	72,837	10%
SOUTH DAKOTA	139,534	141,609	2,075	1%
TENNESSEE	1,066,840	1,276,249	209,409	20%
TEXAS	4,708,080	6,374,355	1,666,275	35%
UTAH	578,117	741,509	163,392	28%
VERMONT	98,069	104,292	6,223	6%
VIRGINIA	1,344,229	1,658,902	314,673	23%
WASHINGTON	1,061,833	1,412,399	350,566	33%
WEST VIRGINIA	281,176	237,960	-43,216	-15%
WISCONSIN	951,577	999,194	47,617	5%
WYOMING	83,602	74,116	-9,486	-11%
US TOTAL	53,005,348	61,435,403	8,430,055	16%

Age Dependency Ratio* 2010 vs 2030

State	2010	2030	Percent Change
ALABAMA	60%	79%	19%
ALASKA	52%	77%	25%
ARIZONA	65%	87%	22%
ARKANSAS	63%	80%	17%
CALIFORNIA	57%	71%	14%
COLORADO	55%	72%	17%
CONNECTICUT	59%	78%	19%
DELAWARE	60%	82%	22%
FLORIDA	63%	89%	26%
GEORGIA	57%	73%	16%
HAWAII	58%	80%	22%
IDAHO	66%	75%	9%
ILLINOIS	59%	73%	14%
INDIANA	61%	76%	15%
IOWA	63%	81%	18%
KANSAS	63%	79%	16%
KENTUCKY	59%	74%	15%
LOUISIANA	59%	77%	18%
MAINE	58%	81%	23%
MARYLAND	55%	73%	18%
MASSACHUSETTS	55%	75%	20%
MICHIGAN	60%	73%	13%
MINNESOTA	59%	75%	16%
MISSISSIPPI	62%	77%	15%
MISSOURI	61%	77%	16%
MONTANA	60%	85%	25%

State	2010	2030	Percent Change
NEBRASKA	63%	84%	21%
NEVADA	58%	78%	20%
NEW HAMPSHIRE	55%	76%	21%
NEW JERSEY	59%	73%	14%
NEW MEXICO	62%	93%	31%
NEW YORK	56%	73%	17%
NORTH CAROLINA	58%	75%	17%
NORTH DAKOTA	58%	86%	28%
OHIO	61%	76%	15%
OKLAHOMA	62%	80%	18%
OREGON	58%	71%	13%
PENNSYLVANIA	60%	79%	19%
RHODE ISLAND	56%	76%	20%
SOUTH CAROLINA	59%	79%	20%
SOUTH DAKOTA	65%	91%	26%
TENNESSEE	59%	77%	18%
TEXAS	60%	74%	14%
UTAH	68%	77%	9%
VERMONT	54%	78%	24%
VIRGINIA	55%	74%	19%
WASHINGTON	56%	69%	13%
WEST VIRGINIA	59%	78%	19%
WISCONSIN	59%	77%	18%
WYOMING	57%	84%	27%
US TOTAL	**59%**	**76%**	**17%**

*The age dependency ratio is derived by dividing the combined under 18 and 65-and-over populations by the 18-to-64 population and multiplying by 100.

1. THE 2010 AGE DEPENDENCY RATIOS ARE PROVIDED BY THE U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2012. THE LISTED SOURCE IS THE U.S. CENSUS BUREAU, TABLE GCT-T6-R, "AGE DEPENDENCY RATIO OF THE TOTAL POPULATION"

2. THE 2030 AGE DEPENDENCY RATIOS ARE PROVIDED BY AN AUTHOR CALCULATION USING THE U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005 FOR THE 2030 PROJECTED POPULATION.
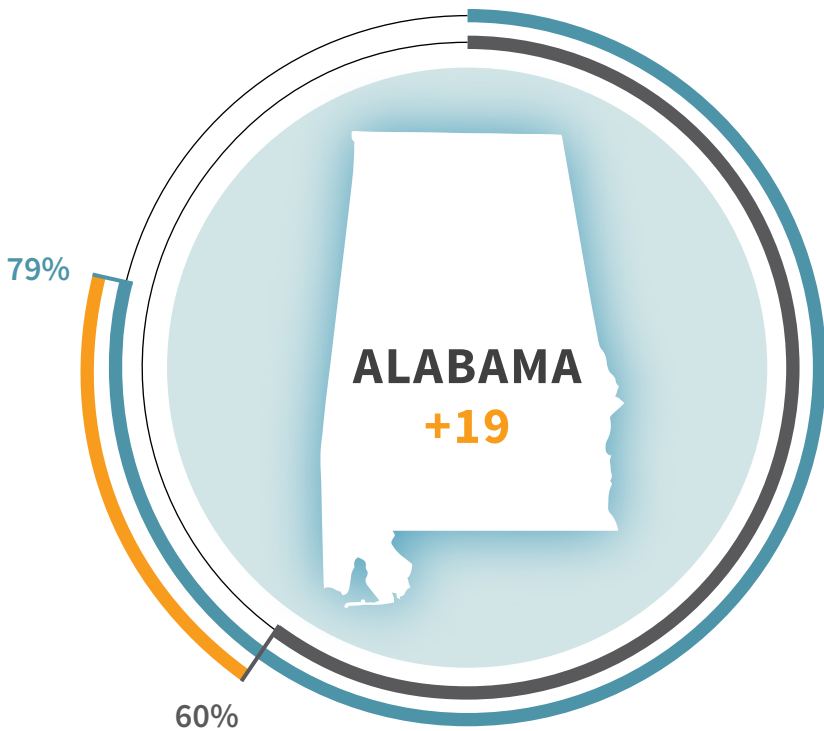
States Ranked by Percent Change Between 2010 & 2030 Projected Total Age Dependency Ratio

Rank/State	2010	2030	Percent Change	Rank/State	2010	2030	Percent Change
1 NEW MEXICO	62%	93%	31%	26 MARYLAND	55%	73%	18%
2 NORTH DAKOTA	58%	86%	28%	27 OKLAHOMA	62%	80%	18%
3 WYOMING	57%	84%	27%	28 TENNESSEE	59%	77%	18%
4 FLORIDA	63%	89%	26%	29 WISCONSIN	59%	77%	18%
5 SOUTH DAKOTA	65%	91%	26%	30 ARKANSAS	63%	80%	17%
6 ALASKA	52%	77%	25%	31 COLORADO	55%	72%	17%
7 MONTANA	60%	85%	25%	32 NEW YORK	56%	73%	17%
8 VERMONT	54%	78%	24%	33 NORTH CAROLINA	58%	75%	17%
9 MAINE	58%	81%	23%	34 GEORGIA	57%	73%	16%
10 ARIZONA	65%	87%	22%	35 KANSAS	63%	79%	16%
11 DELAWARE	60%	82%	22%	36 MINNESOTA	59%	75%	16%
12 HAWAII	58%	80%	22%	37 MISSOURI	61%	77%	16%
13 NEBRASKA	63%	84%	21%	38 INDIANA	61%	76%	15%
14 NEW HAMPSHIRE	55%	76%	21%	39 KENTUCKY	59%	74%	15%
15 MASSACHUSETTS	55%	75%	20%	40 MISSISSIPPI	62%	77%	15%
16 NEVADA	58%	78%	20%	41 OHIO	61%	76%	15%
17 RHODE ISLAND	56%	76%	20%	42 CALIFORNIA	57%	71%	14%
18 SOUTH CAROLINA	59%	79%	20%	43 ILLINOIS	59%	73%	14%
19 ALABAMA	60%	79%	19%	44 NEW JERSEY	59%	73%	14%
20 CONNECTICUT	59%	78%	19%	45 TEXAS	60%	74%	14%
21 PENNSYLVANIA	60%	79%	19%	46 MICHIGAN	60%	73%	13%
22 VIRGINIA	55%	74%	19%	47 OREGON	58%	71%	13%
23 WEST VIRGINIA	59%	78%	19%	48 WASHINGTON	56%	69%	13%
24 IOWA	63%	81%	18%	49 IDAHO	66%	75%	9%
25 LOUISIANA	59%	77%	18%	50 UTAH	68%	77%	9%

*The age dependency ratio is derived by dividing the combined under 18 and 65-and-over populations by the 18-to-64 population and multiplying by 100.

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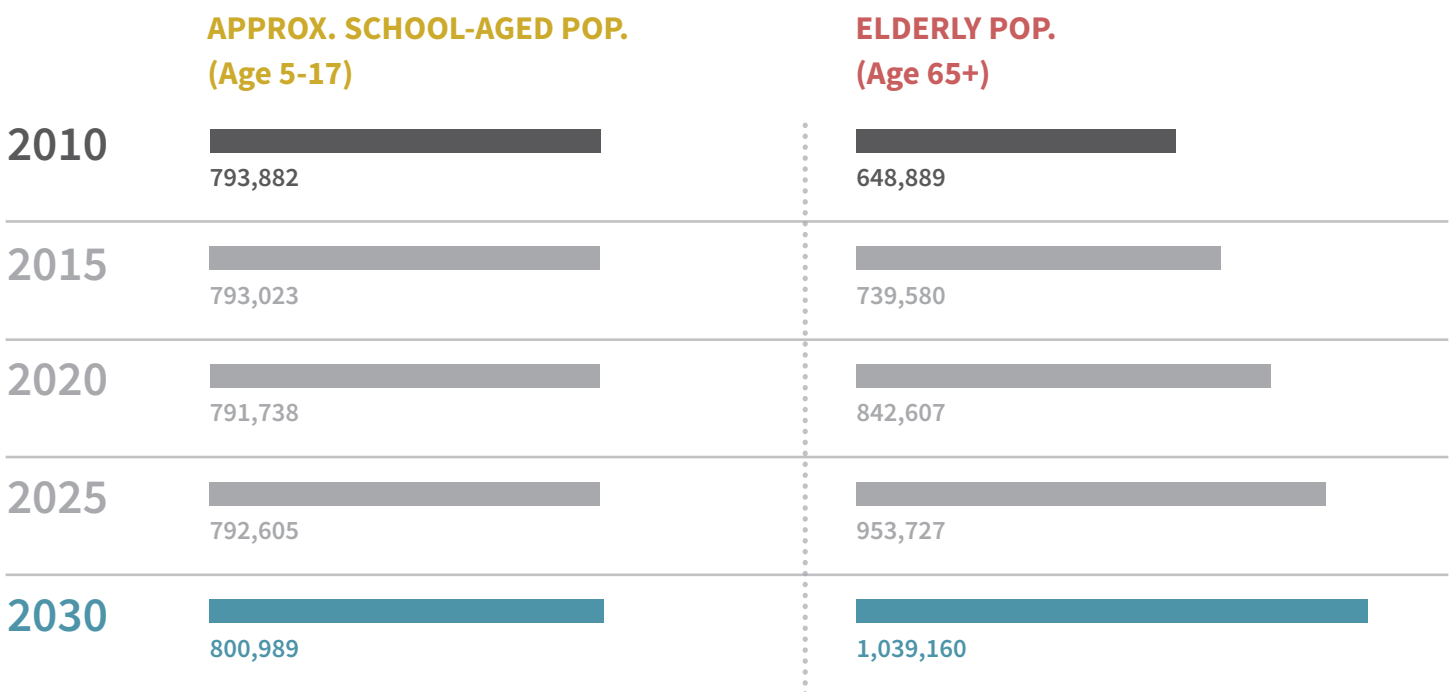
AGE DEPENDENCY RATIO*
(2010 vs 2030)

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.
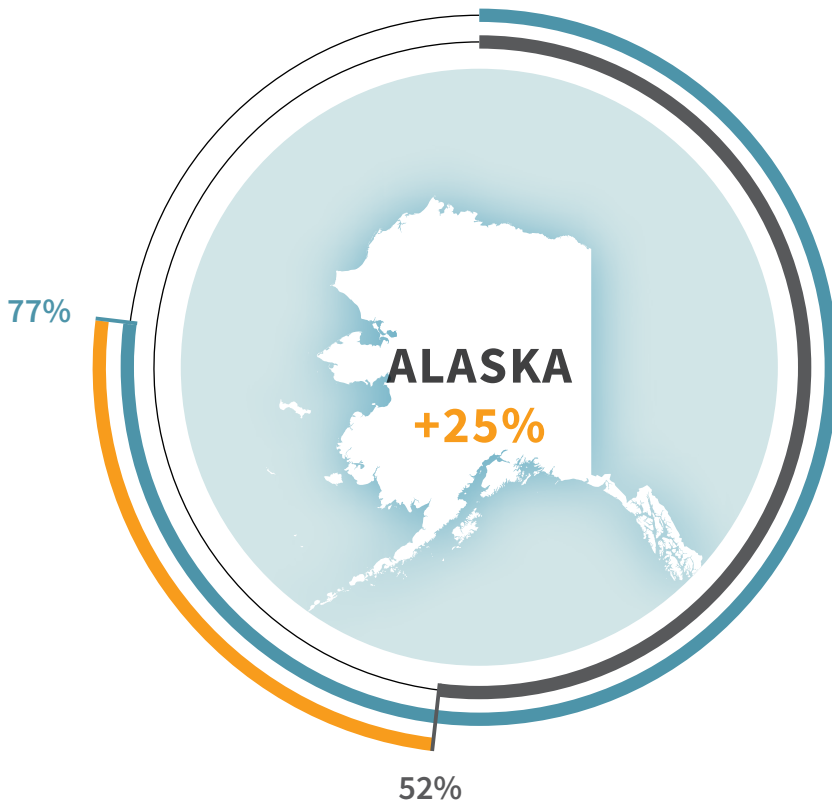
Economists have found dependency ratios to be predictive of economic growth. When ratios are high, you have a high percentage of people out of the work force and a relatively small percentage of people trying to cover the costs of their education, retirement and health care.
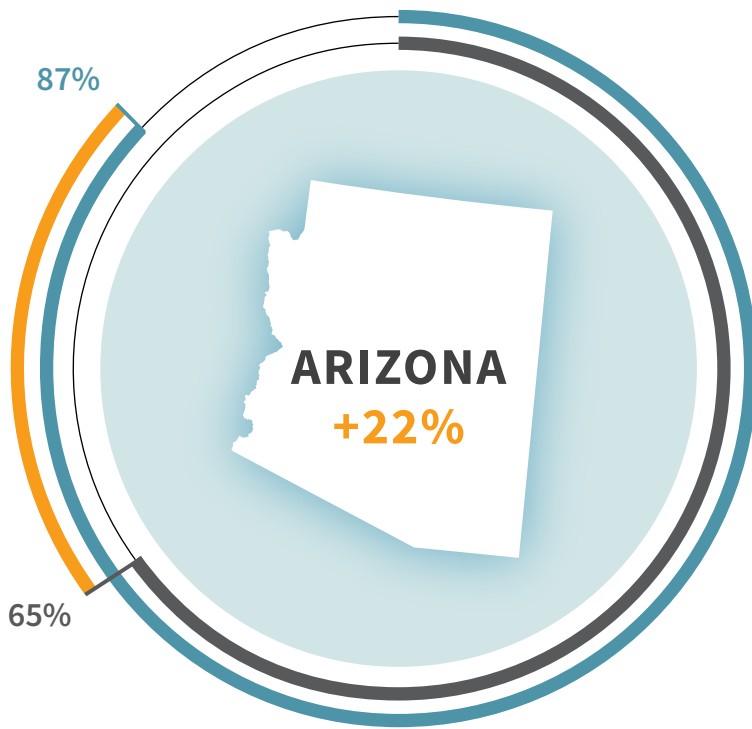
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

The 5-17 population grouping available from Census data most closely approximates the public school population. It is clear a massive influx of new students is on the way. Coupled with the vast increase in the elderly population, state policymakers should expect to wrestle with increased demand for public education and health care spending compounded by slower tax revenue growth.

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	793,882	648,889
2015	793,023	739,580
2020	791,738	842,607
2025	792,605	953,727
2030	800,989	1,039,160

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005
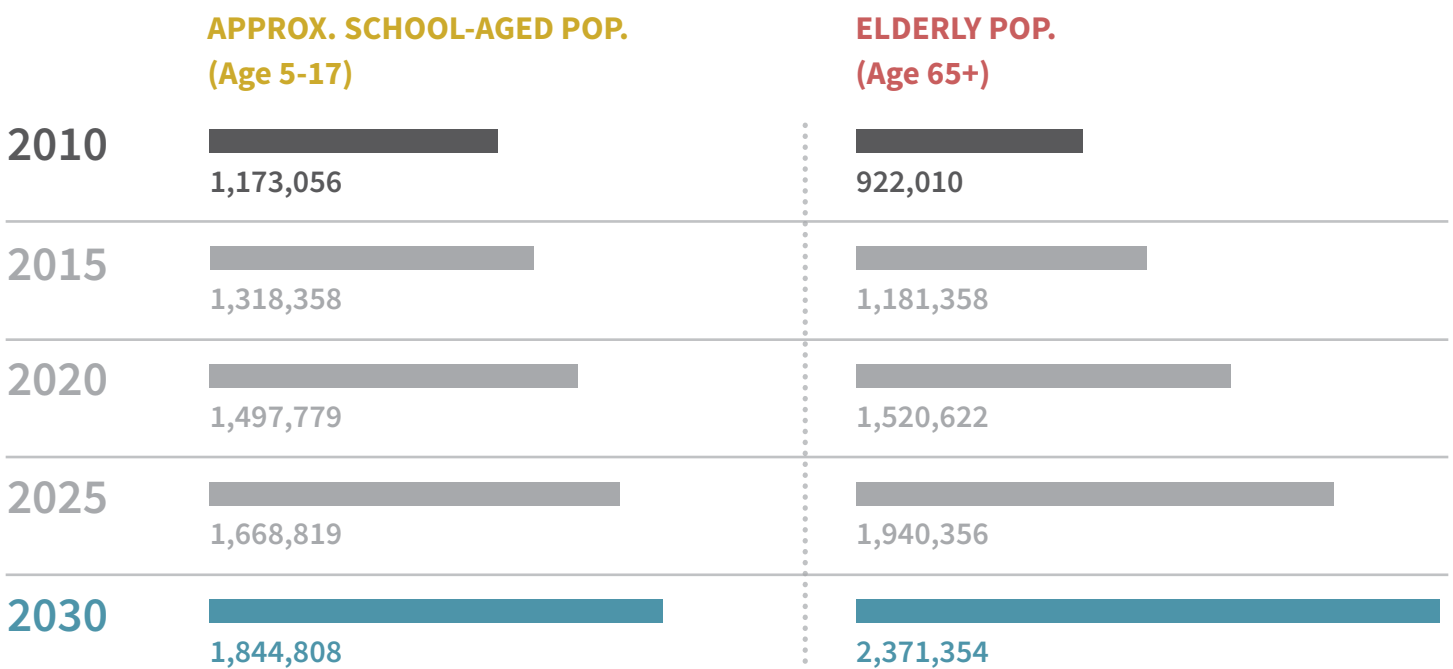
AGE DEPENDENCY RATIO*
(2010 vs 2030)

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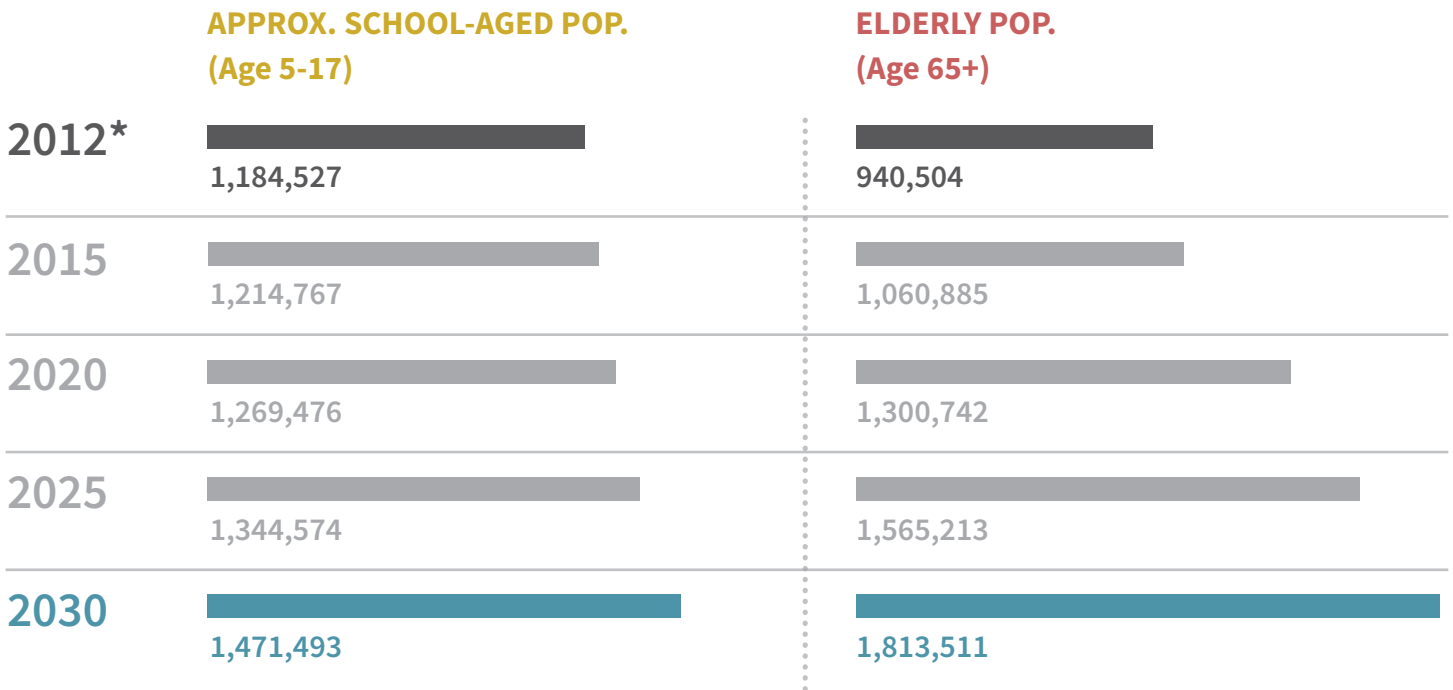---

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	125,603	56,548
2015	134,898	75,023
2020	151,957	96,388
2025	167,373	115,135
2030	176,174	127,202

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

87%

65%

ARIZONA
+22%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,173,056	922,010
2015	1,318,358	1,181,358
2020	1,497,779	1,520,622
2025	1,668,819	1,940,356
2030	1,844,808	2,371,354

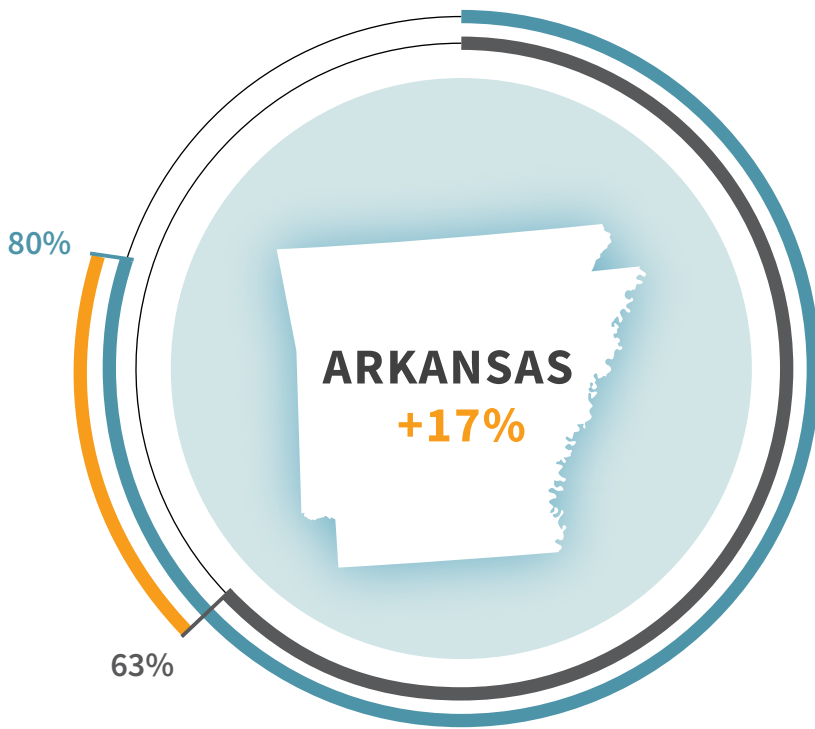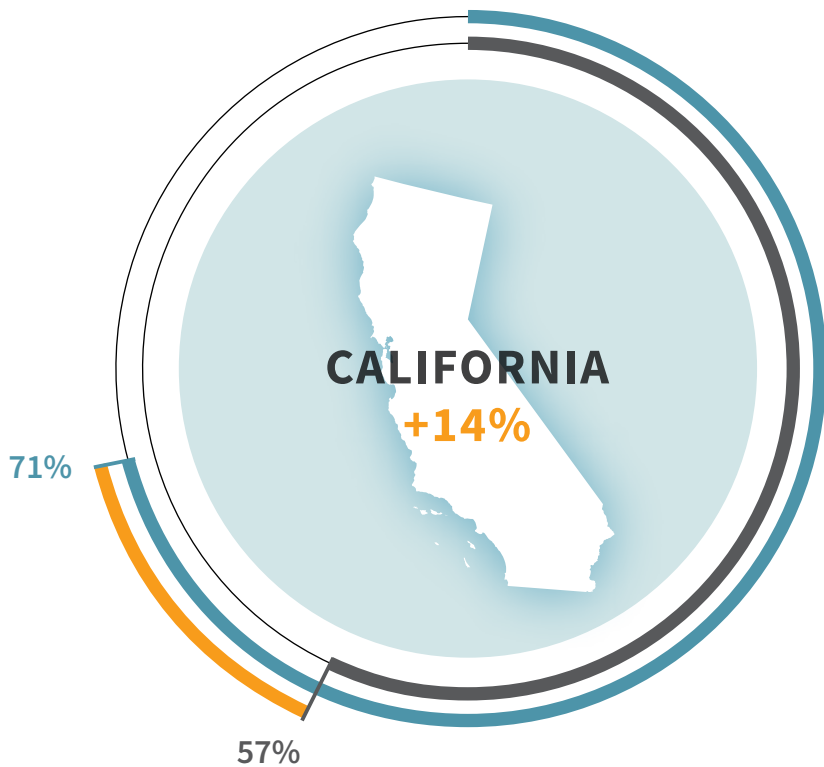U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

2012 POPULATION PROJECTIONS

The Elderly population approximately doubles in both the 2005 Census Bureau estimates and the Arizona Department of Administration Medium Series estimates, but the projected youth population increase is considerably smaller in the Arizona estimates. The increase in working-aged population also comes in smaller for the Arizona estimates, and in the end the estimate for the age dependency ratio is essentially identical. The estimate for Arizona's Age Dependency Ratio is close under the Medium Series estimates to the Census Bureau 2005 projection (87% for the Census Bureau, 78% for the Arizona Department of Administration Medium Series estimate).

ARIZONA cont'd

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2012*	1,184,527	940,504
2015	1,214,767	1,060,885
2020	1,269,476	1,300,742
2025	1,344,574	1,565,213
2030	1,471,493	1,813,511

*The Arizona December 2012 Projection provides population estimates for the years 2012–2050. For consistency with the Arizona data the 2012 figures provided are used to calculate the projected population increase.

AGE DEPENDENCY RATIO*
(2010 vs 2030)

ARKANSAS
+17%

80%

63%

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.
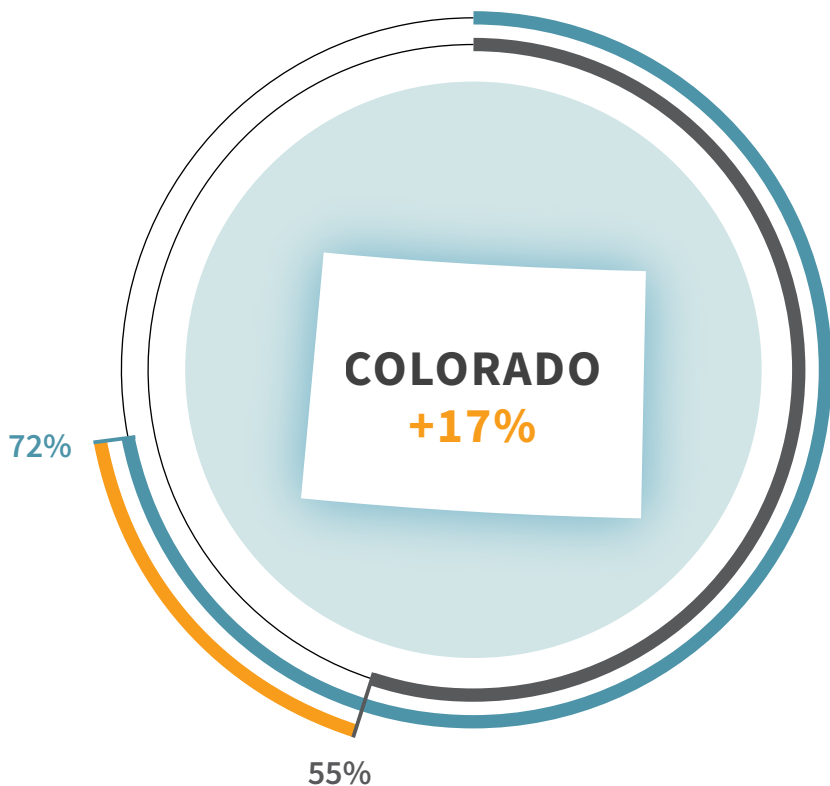
Economists have found dependency ratios to be predictive of economic growth. When ratios are high, you have a high percentage of people out of the work force and a relatively small percentage of people trying to cover the costs of their education, retirement and health care.

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

The 5-17 population grouping available from Census data most closely approximates the public school population. It is clear a massive influx of new students is on the way. Coupled with the vast increase in the elderly population, state policymakers should expect to wrestle with increased demand for public education and health care spending compounded by slower tax revenue growth.

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	507,850	412,152
2015	524,209	467,880
2020	535,796	531,028
2025	544,122	599,028
2030	562,551	656,406

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.
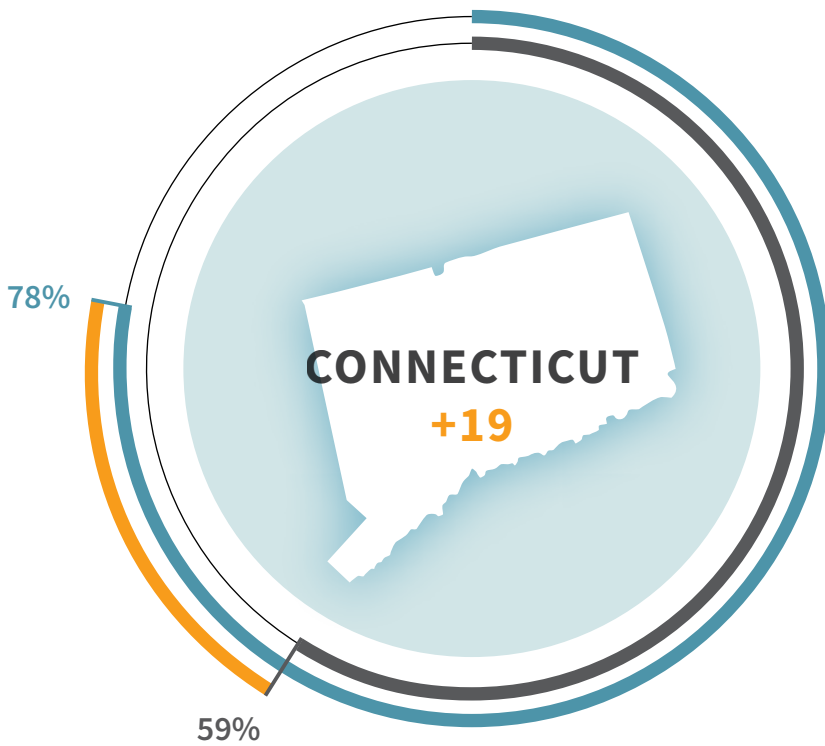
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*The age dependency ratio is derived by dividing the combined under 18 and 65-and-over populations by the 18-to-64 population and multiplying by 100.

CALIFORNIA
+14%

71%

57%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	6,643,946	4,392,708
2015	6,774,960	5,227,964
2020	7,280,143	6,199,126
2025	7,685,948	7,284,978
2030	7,900,053	8,288,241

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
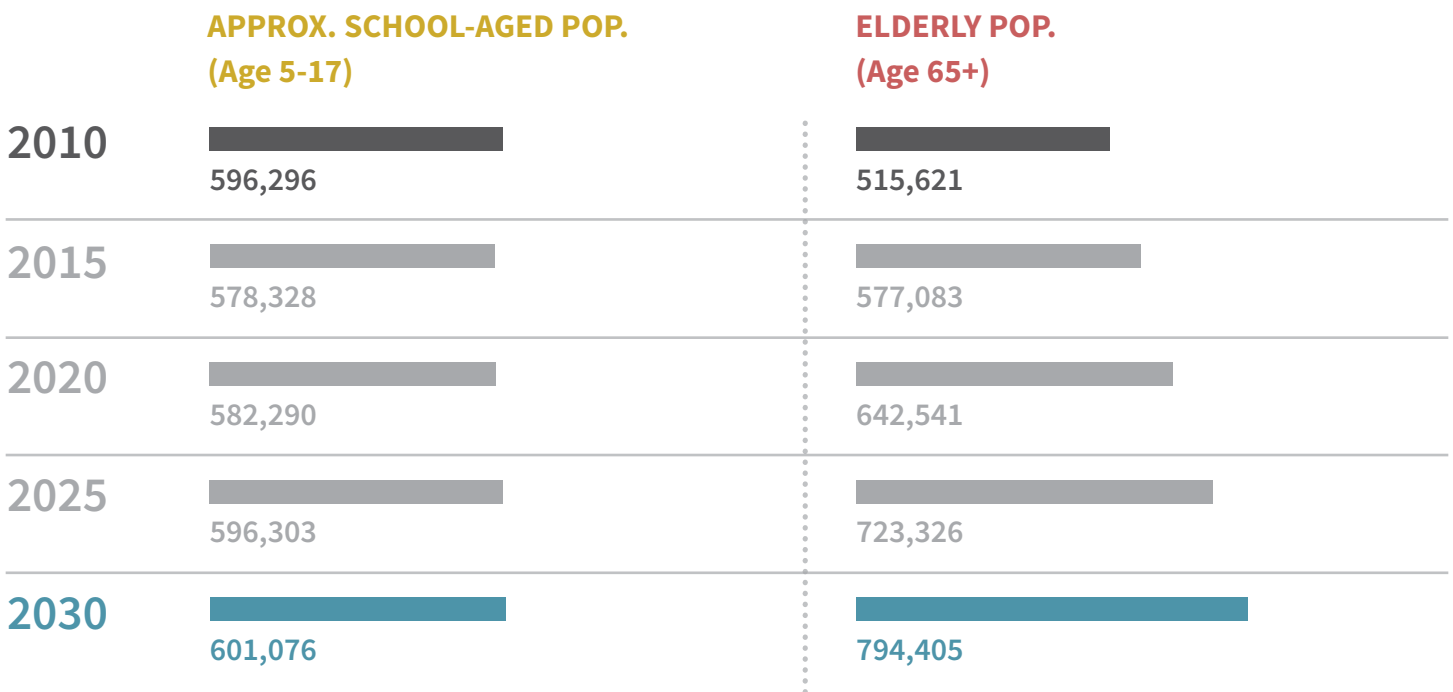## (2010 vs 2030)

COLORADO
+17%

72%

55%

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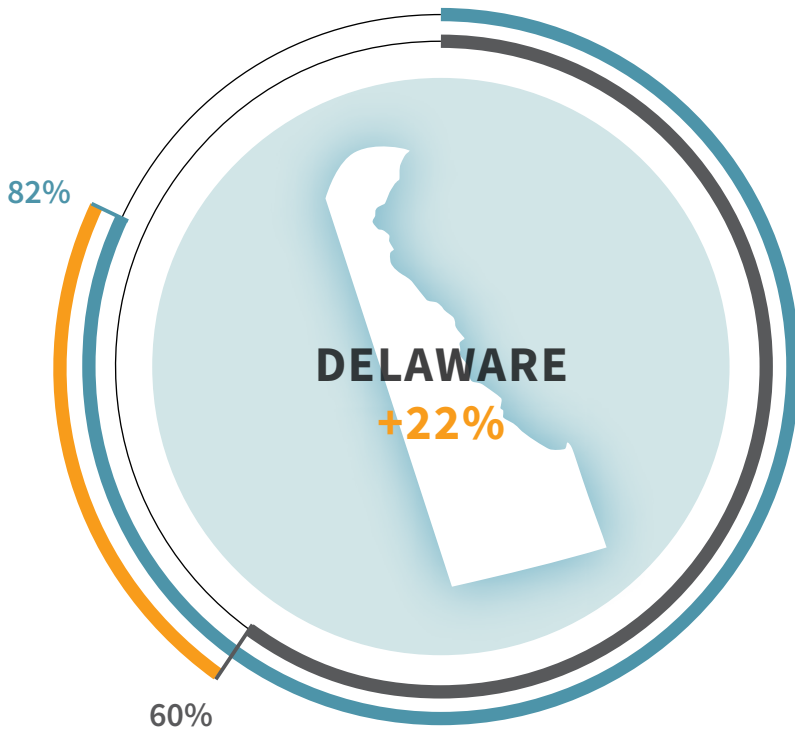
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

The 5-17 population grouping available from Census data most closely approximates the public school population. It is clear a massive influx of new students is on the way. Coupled with the vast increase in the elderly population, state policymakers should expect to wrestle with increased demand for public education and health care spending compounded by slower tax revenue growth.

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	835,574	517,419
2015	886,412	627,408
2020	939,850	750,903
2025	987,372	869,646
2030	1,038,741	956,278

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
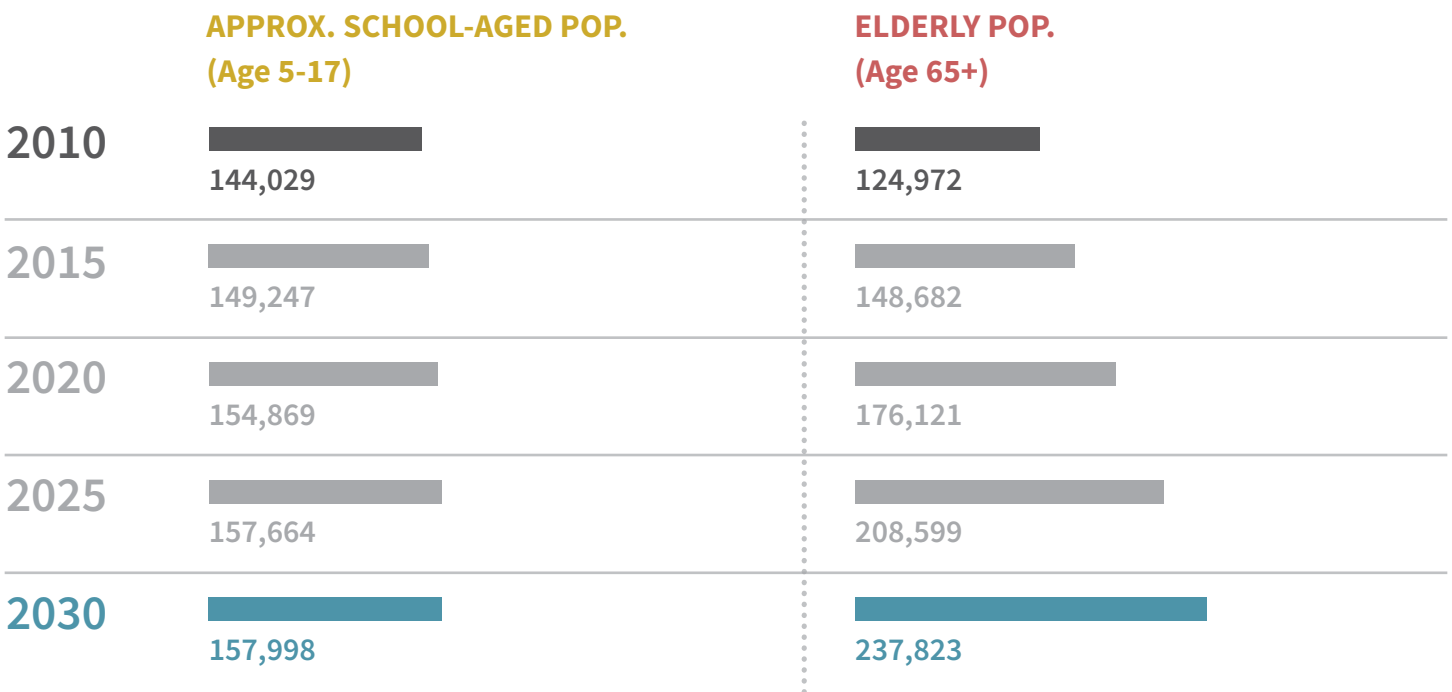## (2010 vs 2030)

78%

CONNECTICUT
+19

59%

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.
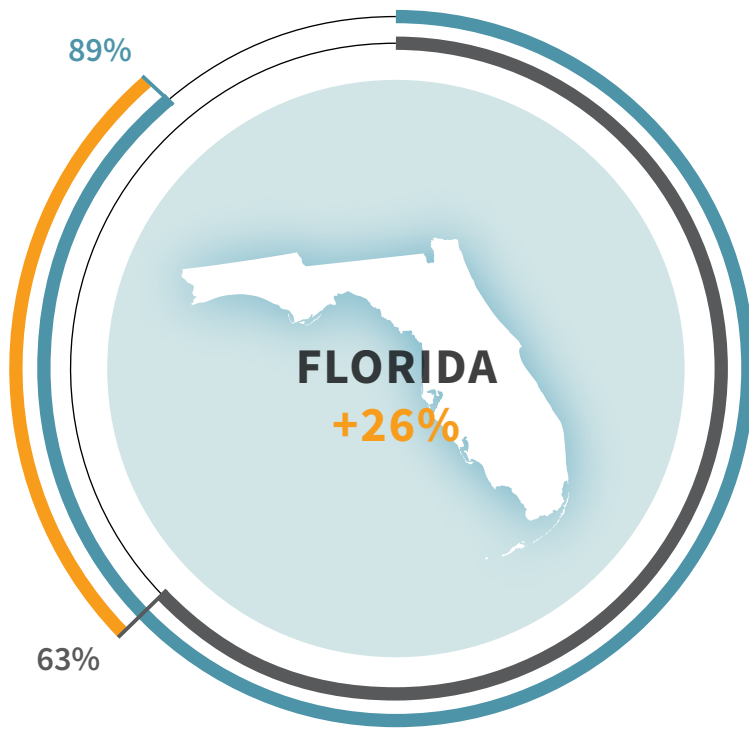
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	596,296	515,621
2015	578,328	577,083
2020	582,290	642,541
2025	596,303	723,326
2030	601,076	794,405

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

DELAWARE
+22%
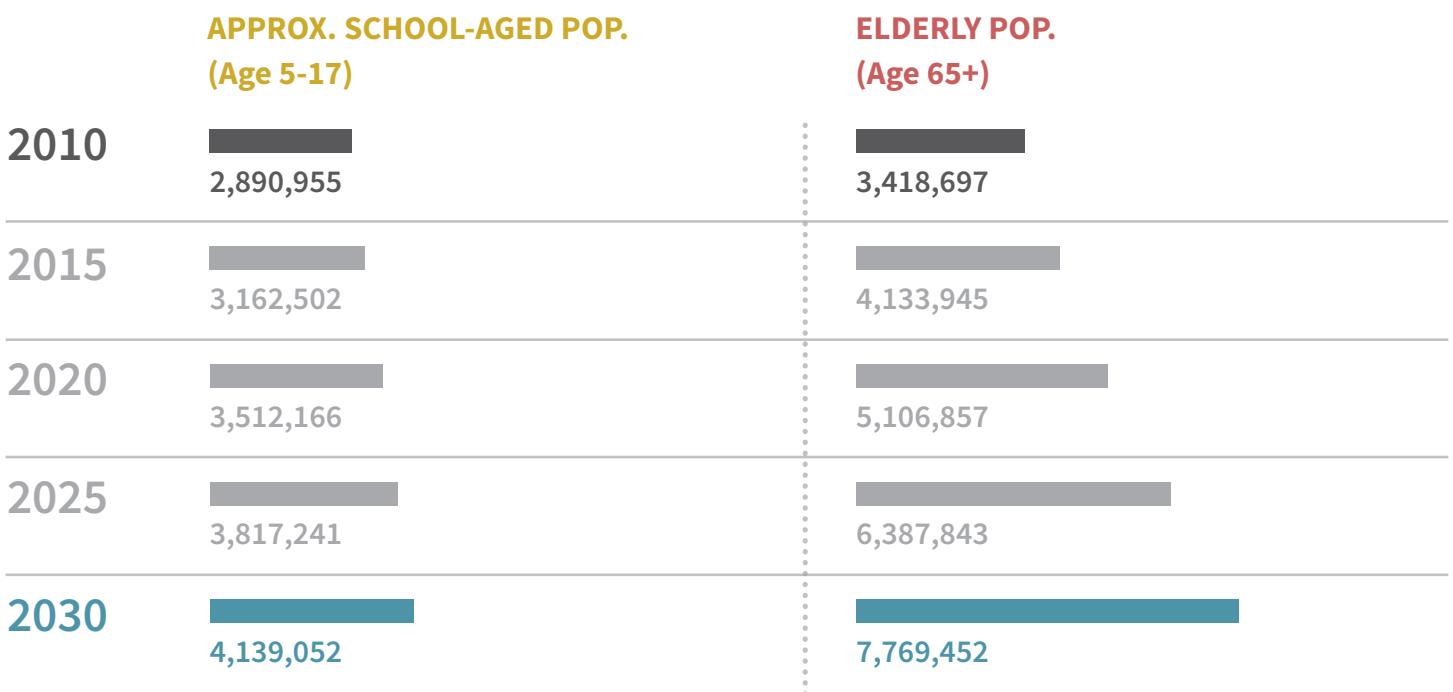
82%

60%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	144,029	124,972
2015	149,247	148,682
2020	154,869	176,121
2025	157,664	208,599
2030	157,998	237,823

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	2,890,955	3,418,697
2015	3,162,502	4,133,945
2020	3,512,166	5,106,857
2025	3,817,241	6,387,843
2030	4,139,052	7,769,452

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005
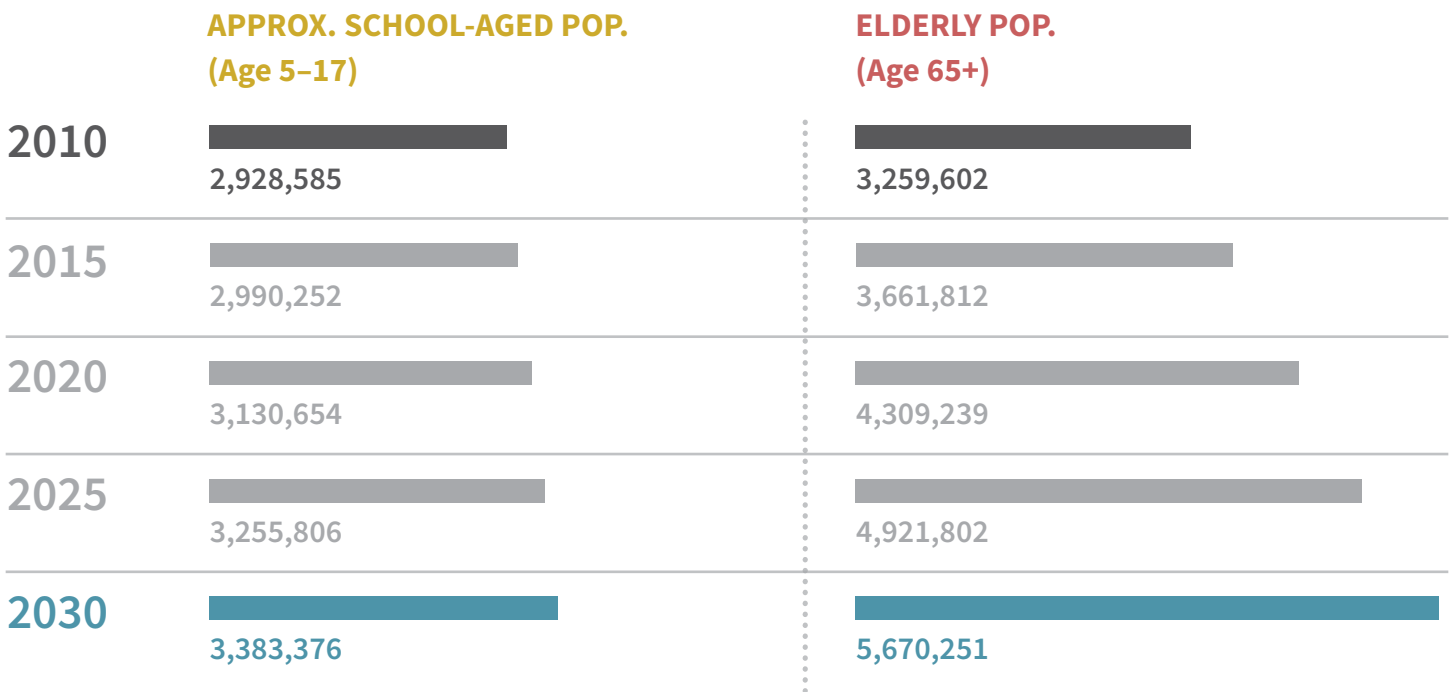
**FLORIDA
cont'd**

ALTERNATE ESTIMATES FROM THE FLORIDA OFFICE OF ECONOMIC AND DEMOGRAPHIC RESEARCH
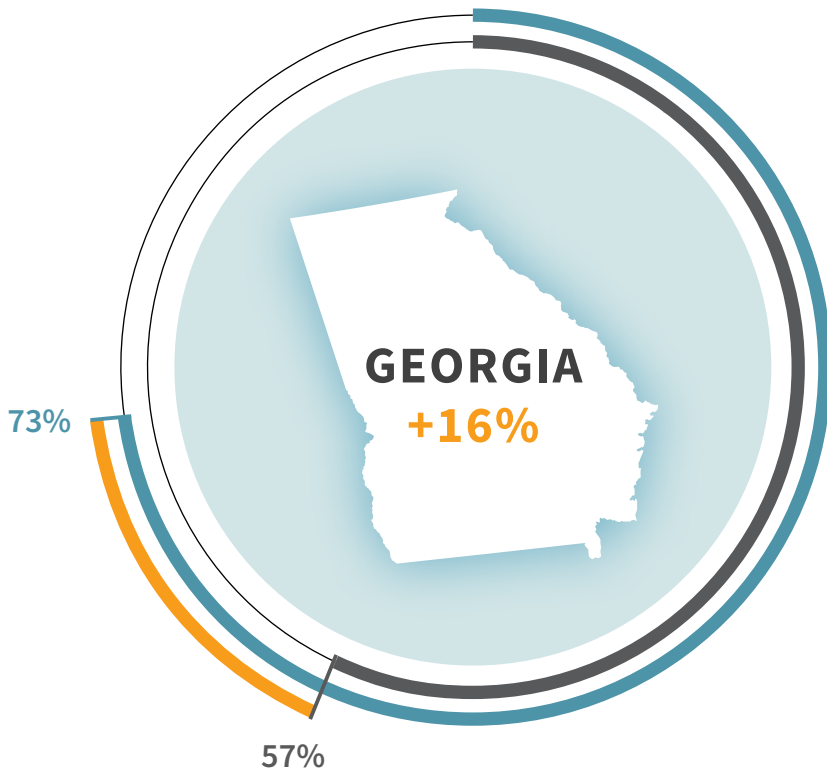
The Florida Office of Economic and Demographic Research foresee far less migration to Florida and lower birthrates. Under the state estimates, the 5-17 aged cohort would expand by almost half a million students while the elderly population over 2.4 million.

In the end however, Florida's projected age dependency ratio looks quite similar under the United States Census Bureau 2005 Interim projections and the revised state estimates – 89 under the Census estimates and 78 under the state estimates. This is in large part because the assumption of lower mobility brings fewer people of working age into the state along with fewer new elderly and young residents.

	APPROX. SCHOOL-AGED POP. (Age 5–17)	**ELDERLY POP.** (Age 65+)
2010	2,928,585	3,259,602
2015	2,990,252	3,661,812
2020	3,130,654	4,309,239
2025	3,255,806	4,921,802
2030	3,383,376	5,670,251

The Census Bureau has a strong track record in forecasting Florida population trends, and the differences between Census Bureau and state estimates hinge upon technical differences in estimation techniques in addition to the more recent data incorporated into the state estimates. Historically Florida's overall population has expanded by an average rate of approximately 3%, but the Florida Office of Economic and Demographic Research foresee a considerable slowing of this rate.

A practical approach for Florida policymakers could be to recognize the fact that an increase in the total age dependency ratio from 66 in 2010 to 78 in 2030 represents a very large challenge. If Florida's population growth returns closer to historical averages, the problem may prove larger still.

AGE DEPENDENCY RATIO*
(2010 vs 2030)

GEORGIA
+16%

73%

57%

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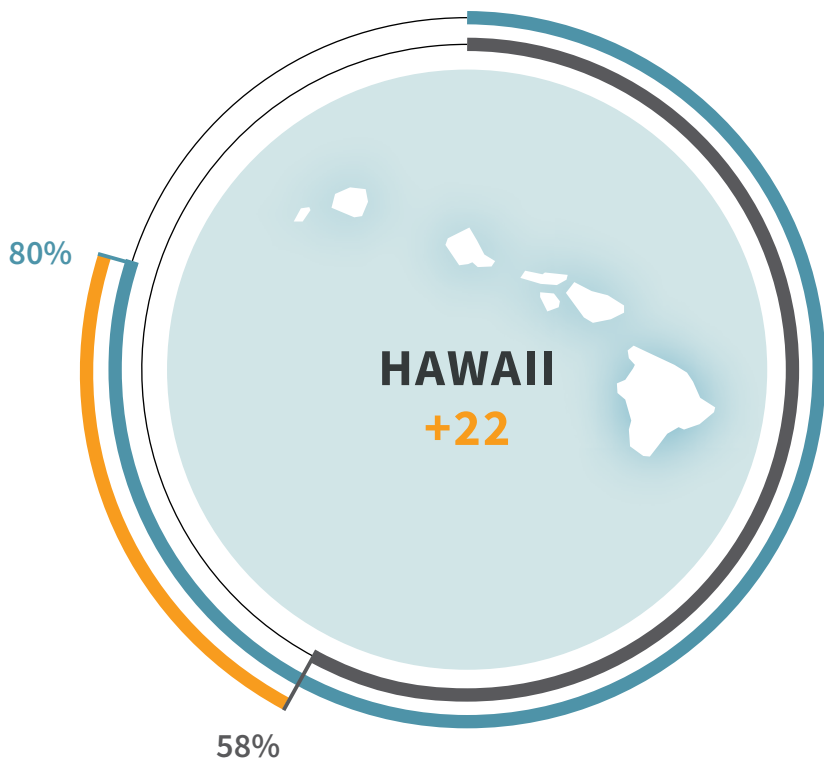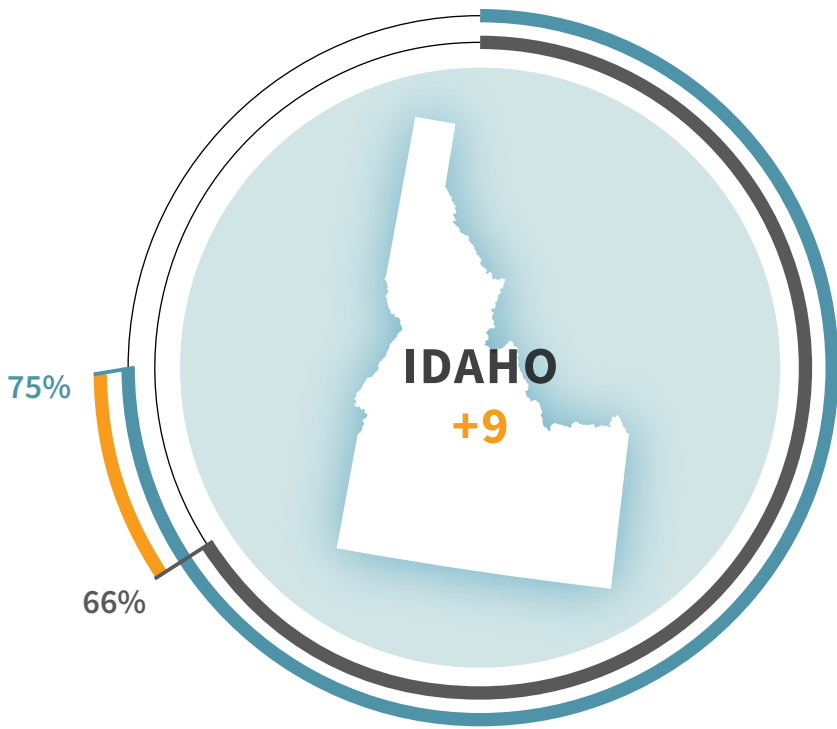
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,771,865	980,824
2015	1,904,750	1,187,576
2020	2,020,441	1,409,923
2025	2,113,114	1,659,679
2030	2,223,764	1,907,837

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

HAWAII
+22

80%

58%

AGE DEPENDENCY RATIO*
(2010 VS 2030)

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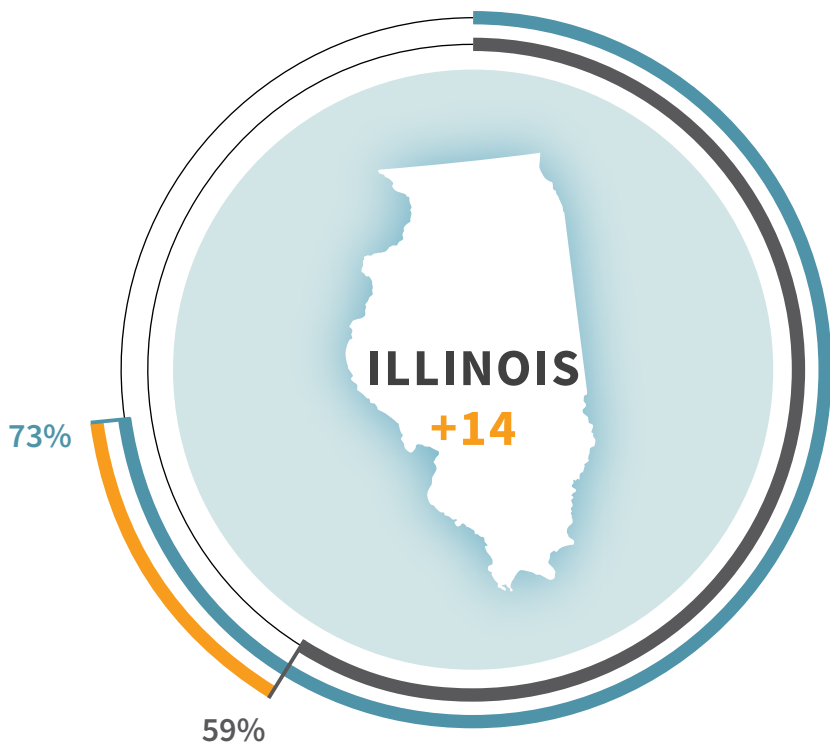
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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	214,916	191,065
2015	228,679	226,189
2020	241,158	264,527
2025	238,324	300,743
2030	233,221	326,957

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 VS 2030)

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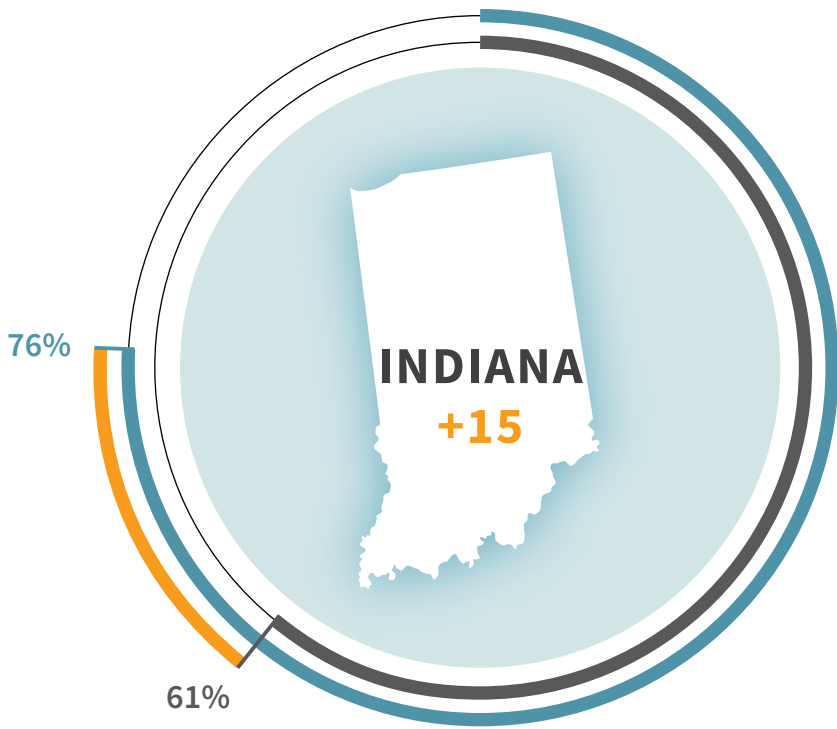
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IDAHO
+9

75%

66%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	284,357	181,416
2015	306,684	220,113
2020	327,163	269,439
2025	341,762	320,205
2030	351,502	361,033

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
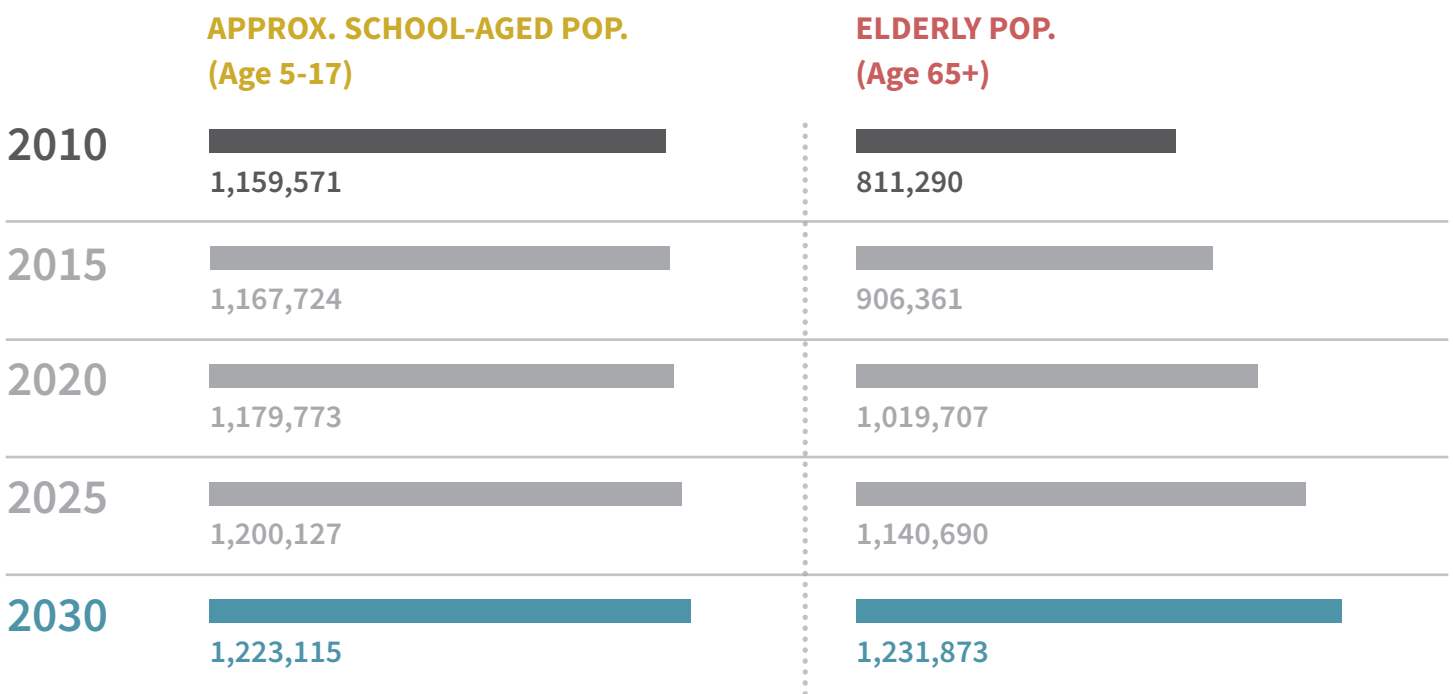## (2010 VS 2030)

ILLINOIS +14

73%
59%

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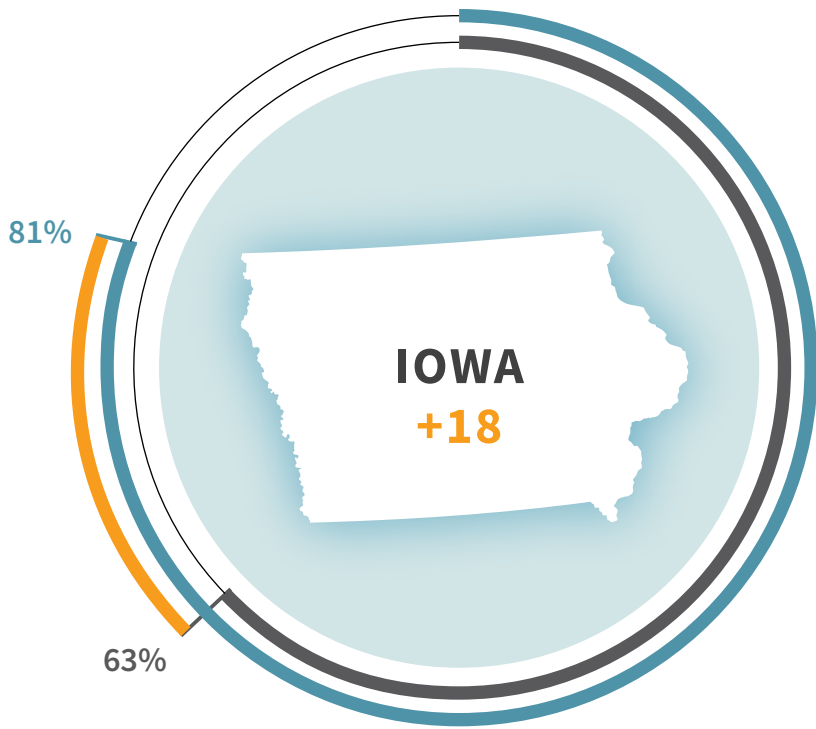
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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	2,270,256	1,600,863
2015	2,273,006	1,777,487
2020	2,317,529	1,988,764
2025	2,332,748	2,226,431
2030	2,326,926	2,412,177

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 VS 2030)

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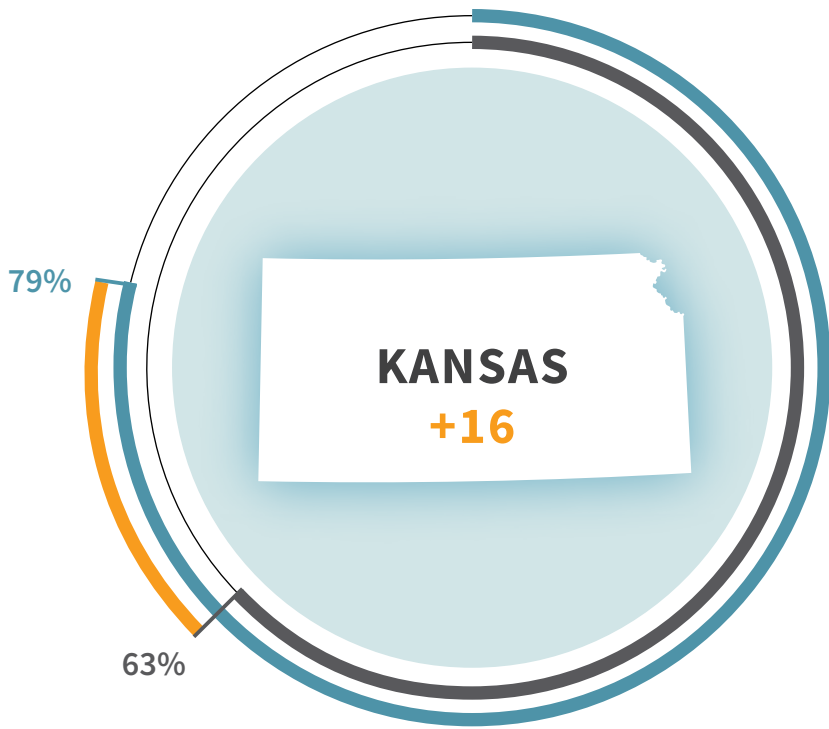
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INDIANA
+15

76%

61%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,159,571	811,290
2015	1,167,724	906,361
2020	1,179,773	1,019,707
2025	1,200,127	1,140,690
2030	1,223,115	1,231,873

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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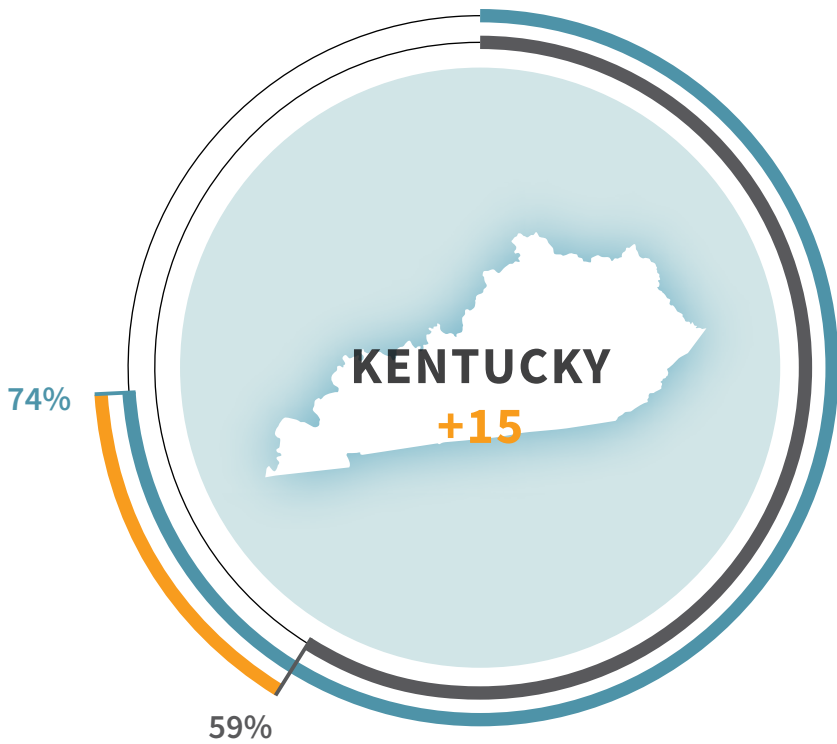
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IOWA
+18

81%

63%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	517,743	449,887
2015	515,384	494,565
2020	511,440	556,540
2025	500,981	619,227
2030	485,393	663,186

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

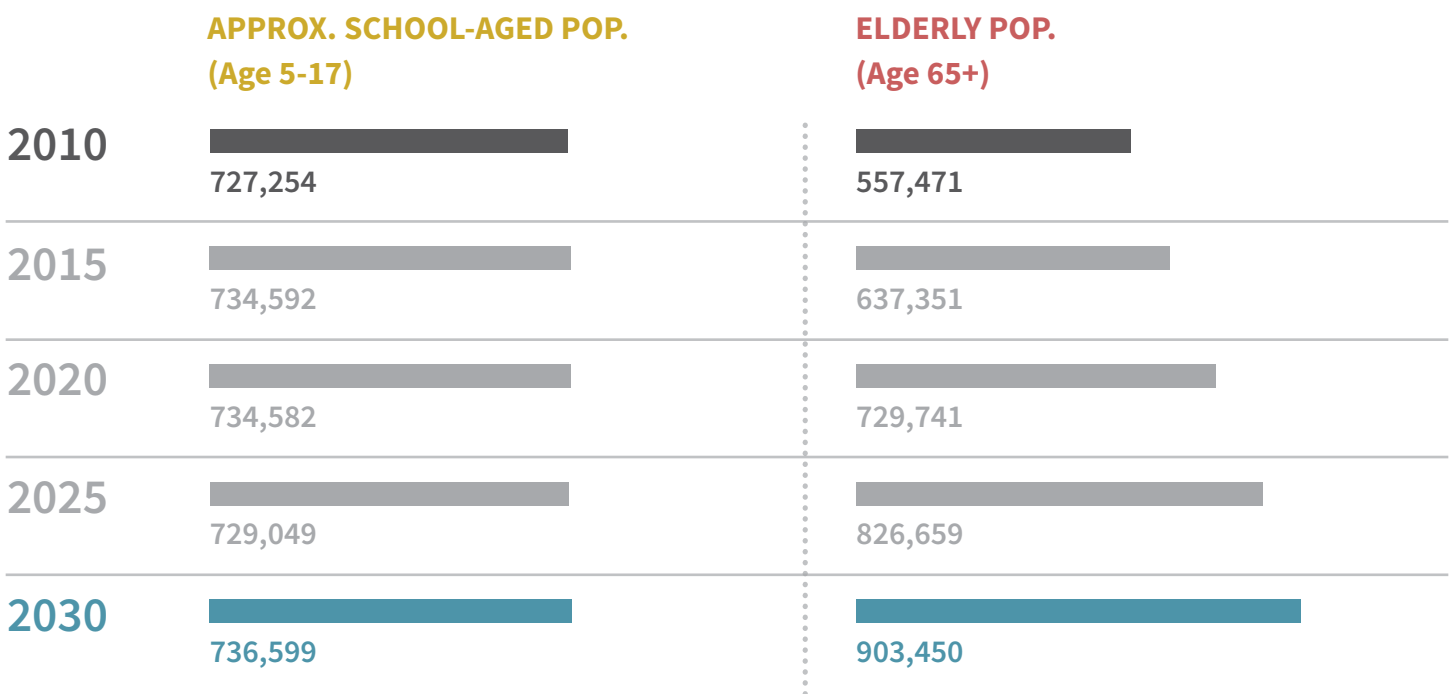Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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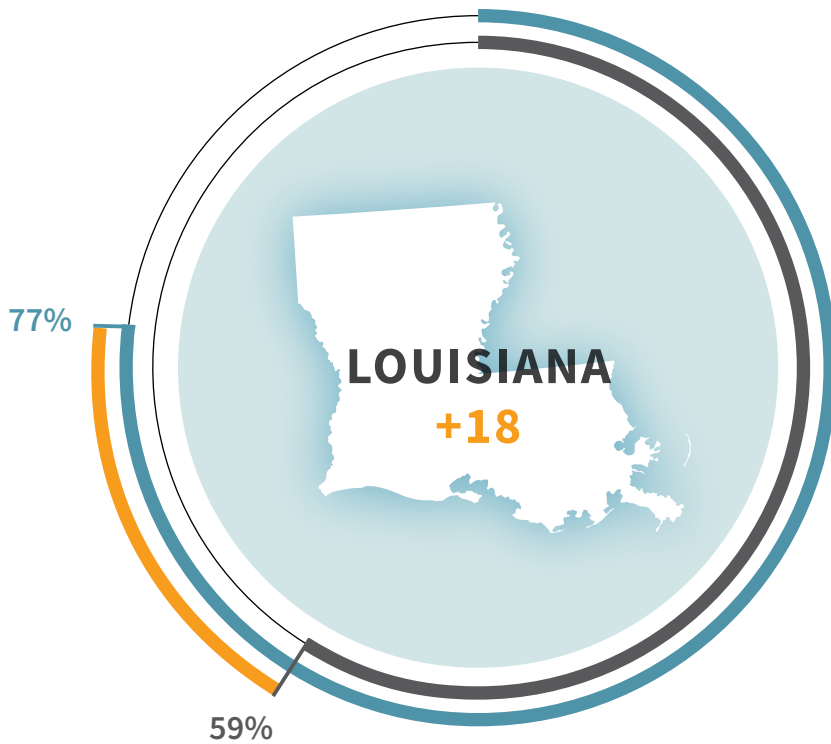
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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	499,462	375,315
2015	506,479	419,748
2020	514,584	479,919
2025	516,163	544,756
2030	511,861	593,091

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005
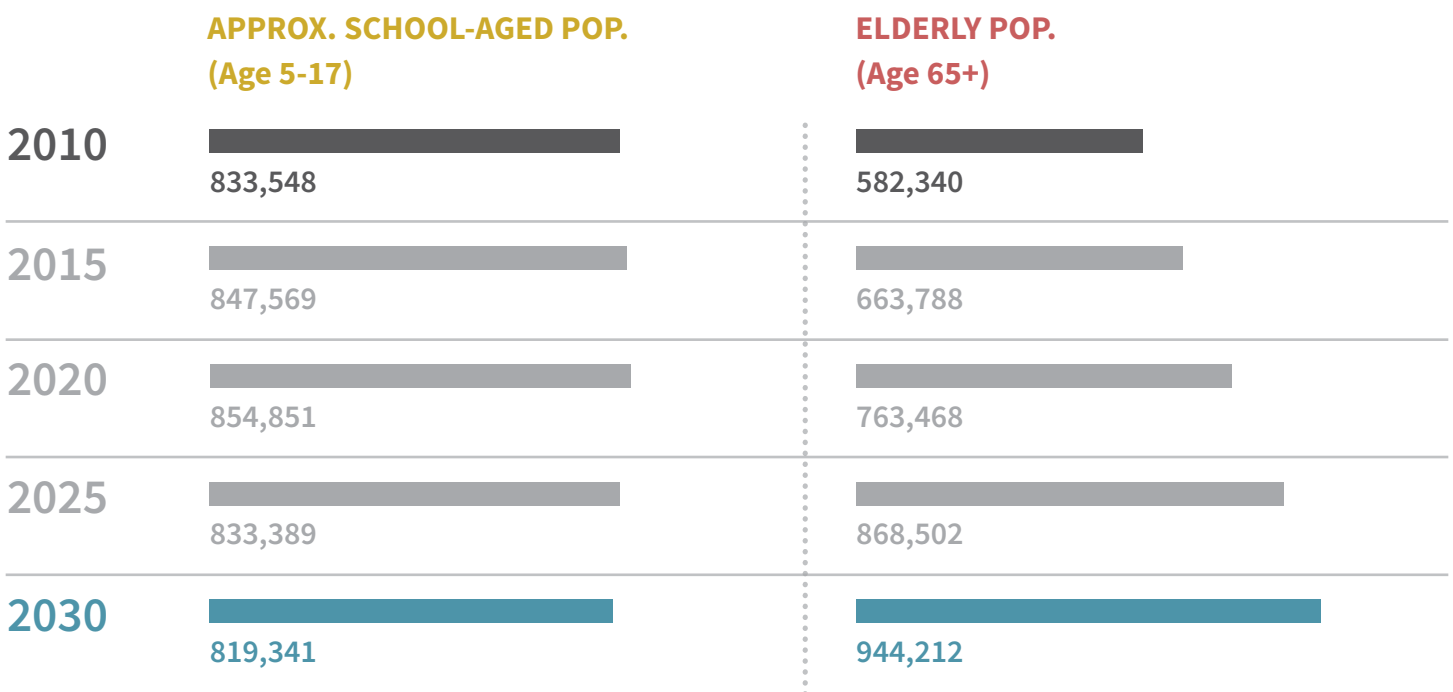
AGE DEPENDENCY RATIO*
(2010 vs 2030)

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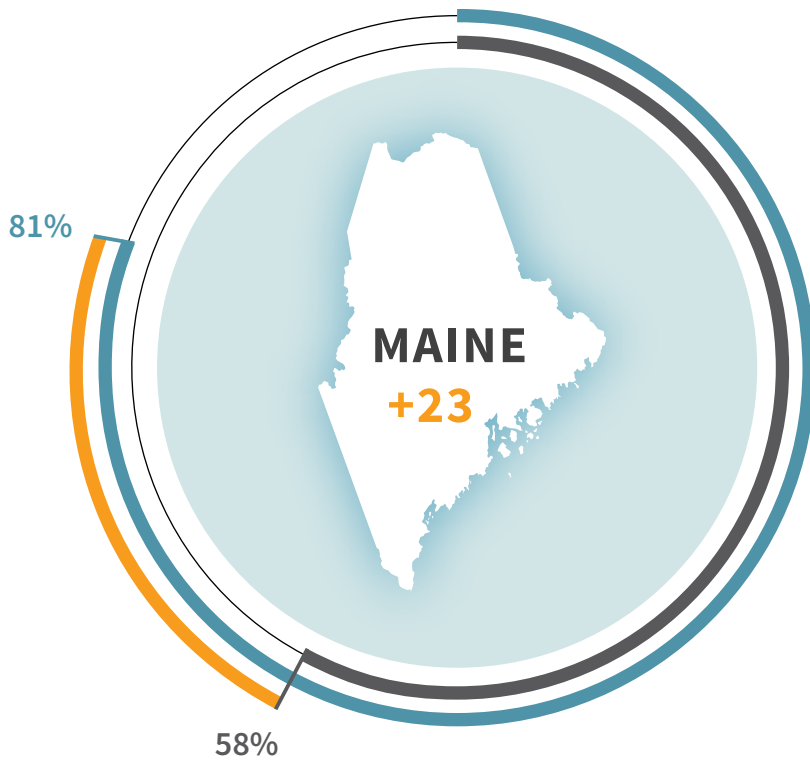
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74%

59%

KENTUCKY

+15

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	727,254	557,471
2015	734,592	637,351
2020	734,582	729,741
2025	729,049	826,659
2030	736,599	903,450

AGE DEPENDENCY RATIO*
(2010 vs 2030)

LOUISIANA
+18

77%

59%

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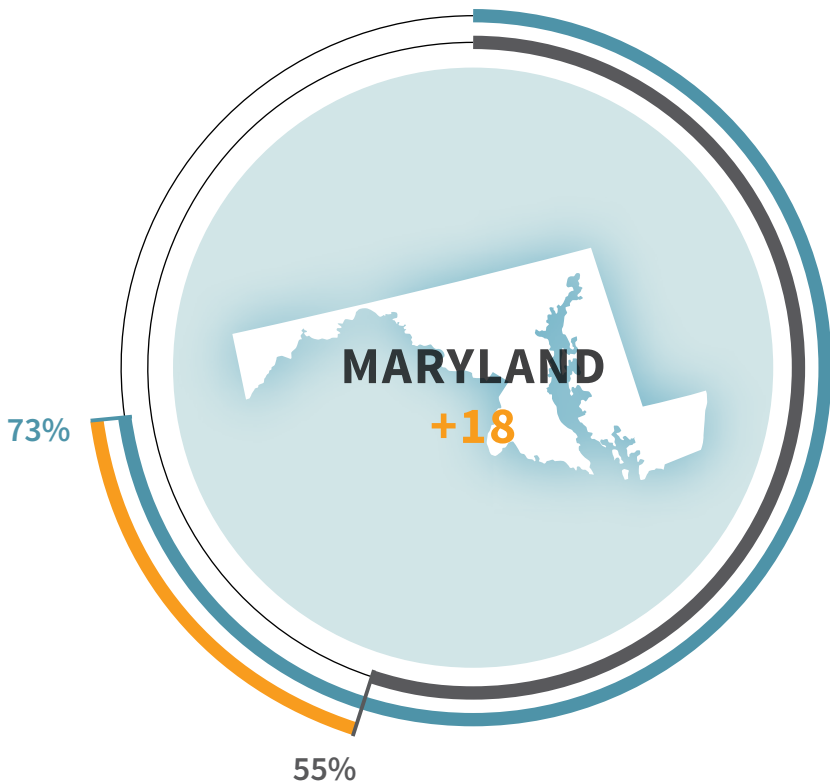
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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	833,548	582,340
2015	847,569	663,788
2020	854,851	763,468
2025	833,389	868,502
2030	819,341	944,212

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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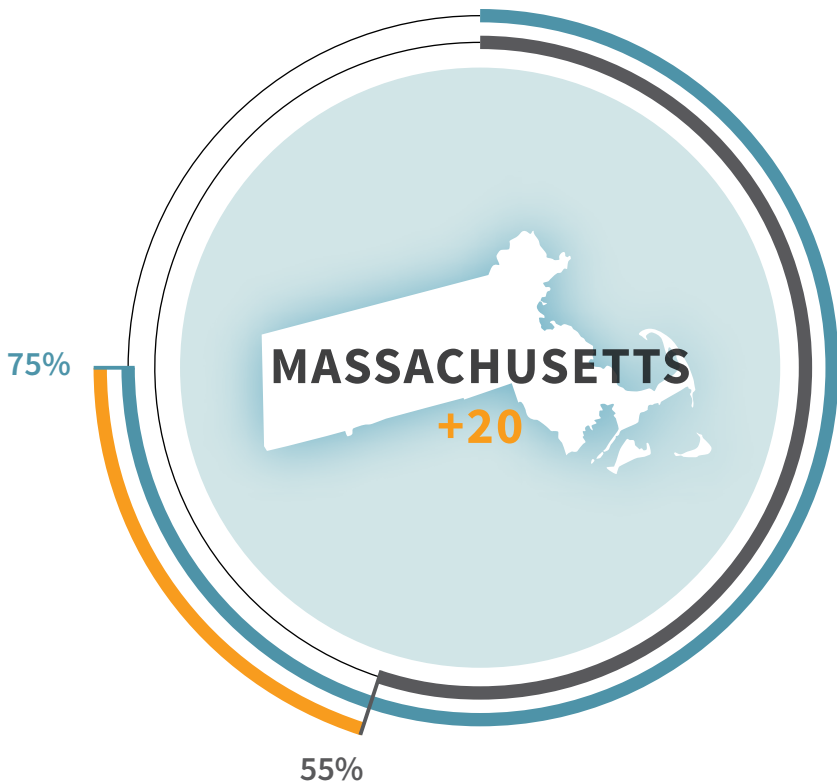
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MAINE
+23

81%

58%

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	196,403	212,278
2015	194,137	250,195
2020	196,836	293,990
2025	197,086	339,038
2030	190,083	374,017

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

MARYLAND
+18

73%

55%

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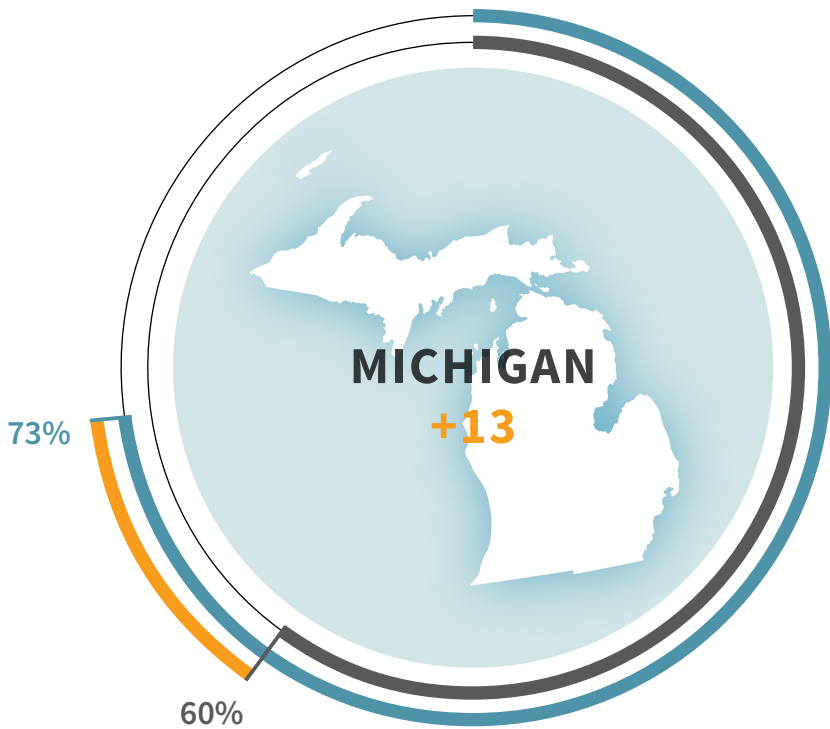
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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	994,142	717,987
2015	1,038,611	837,124
2020	1,118,236	962,160
2025	1,188,985	1,104,757
2030	1,232,853	1,235,695

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

MASSACHUSETTS
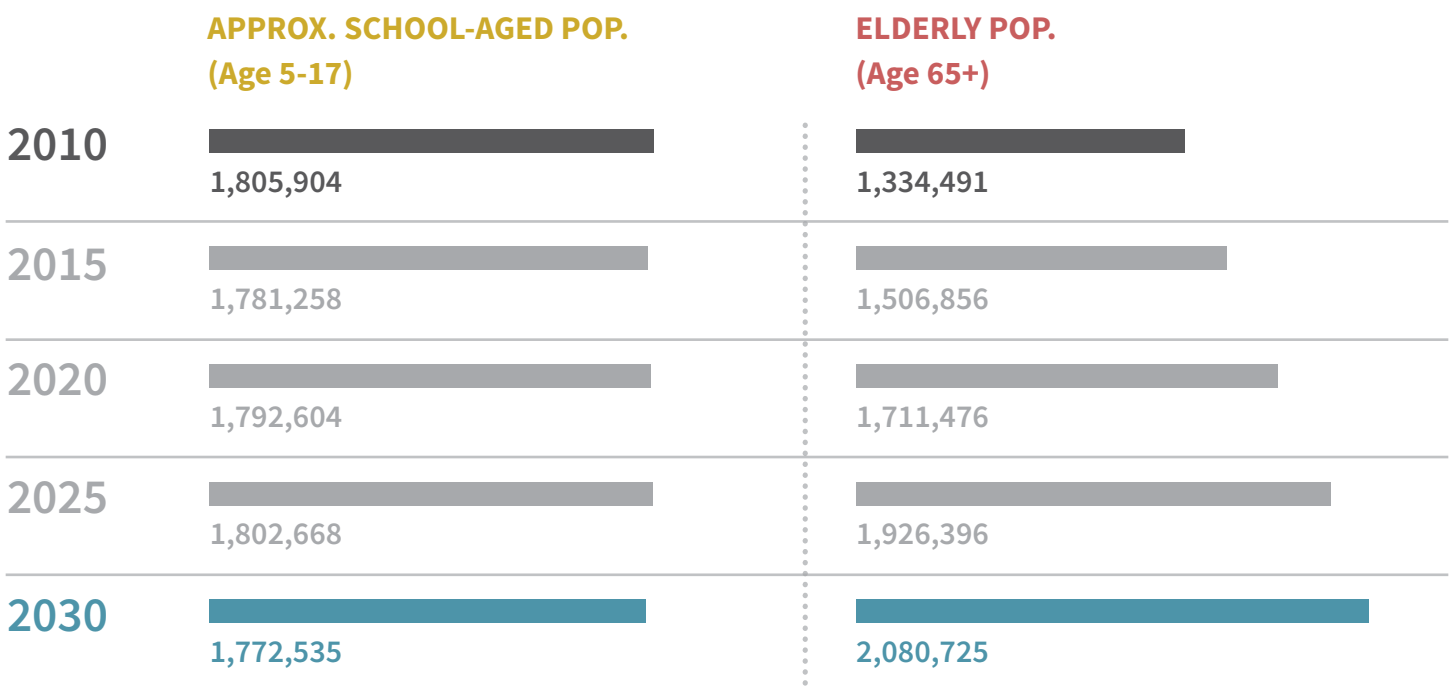**+20**

75%
55%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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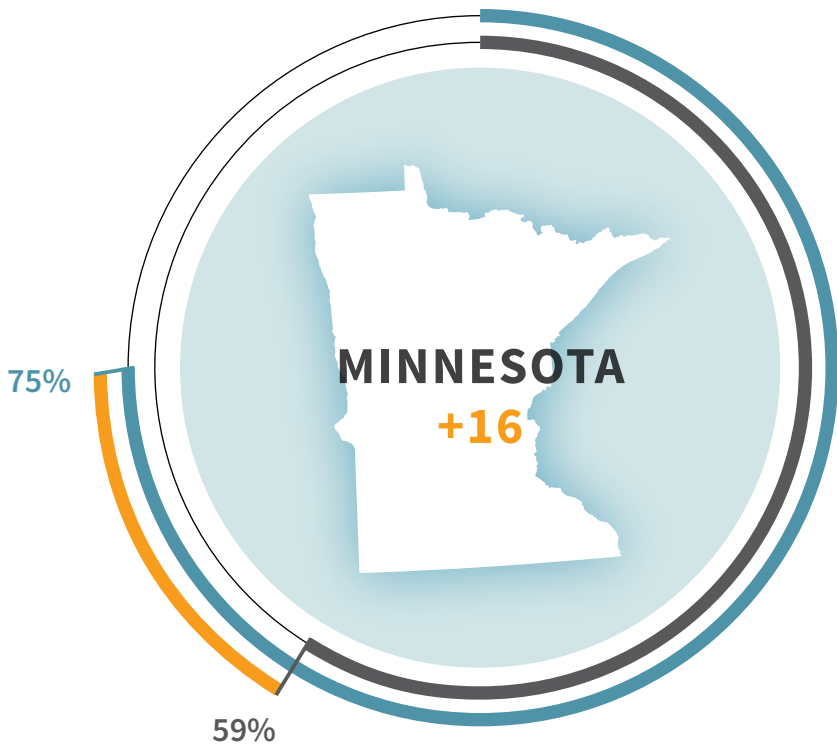
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

The 5-17 population grouping available from Census data most closely approximates the public school population. It is clear a massive influx of new students is on the way. Coupled with the vast increase in the elderly population, state policymakers should expect to wrestle with increased demand for public education and health care spending compounded by slower tax revenue growth.

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,083,149	908,565
2015	1,064,249	1,025,448
2020	1,070,880	1,159,817
2025	1,087,668	1,317,940
2030	1,115,007	1,463,110

AGE DEPENDENCY RATIO*
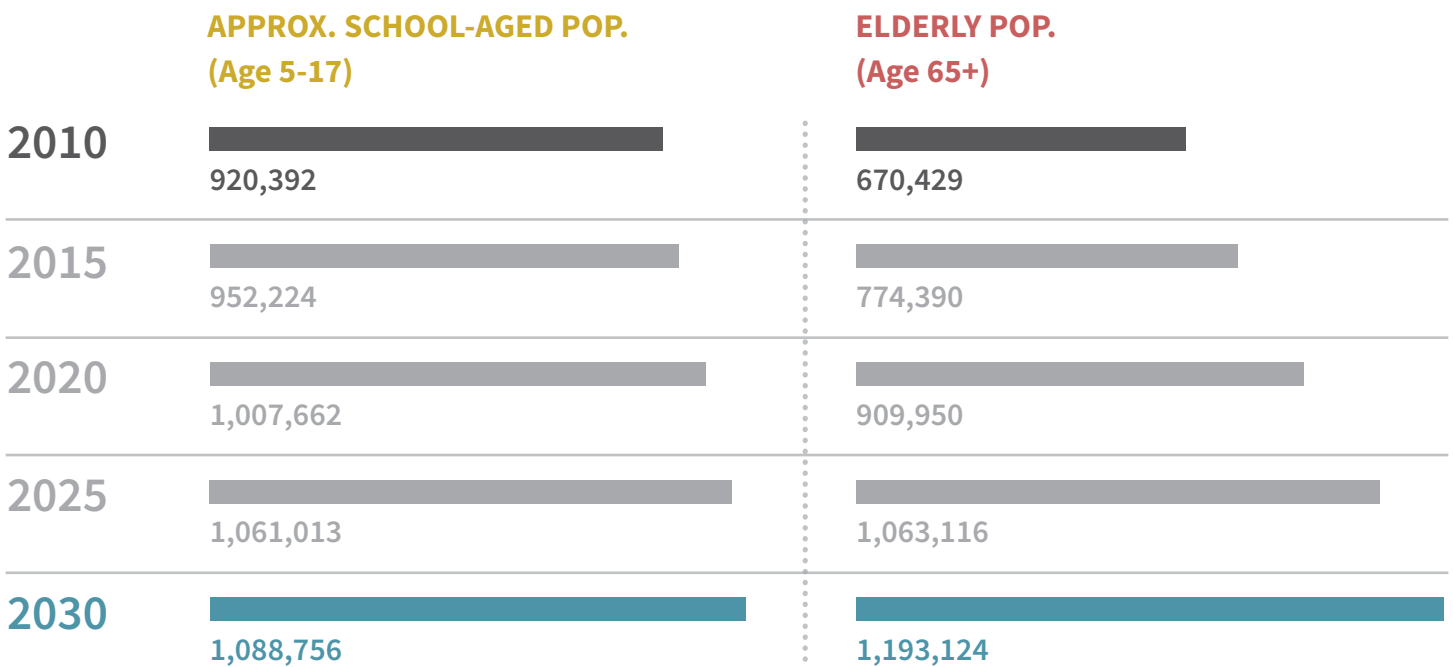## (2010 vs 2030)

MICHIGAN
+13

73%

60%

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.
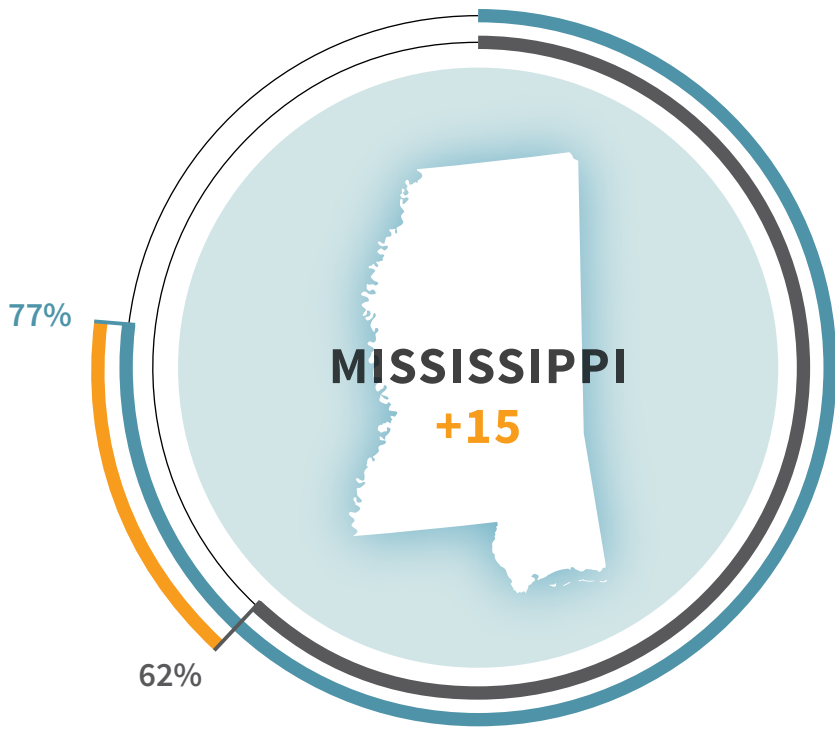
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,805,904	1,334,491
2015	1,781,258	1,506,856
2020	1,792,604	1,711,476
2025	1,802,668	1,926,396
2030	1,772,535	2,080,725

AGE DEPENDENCY RATIO*
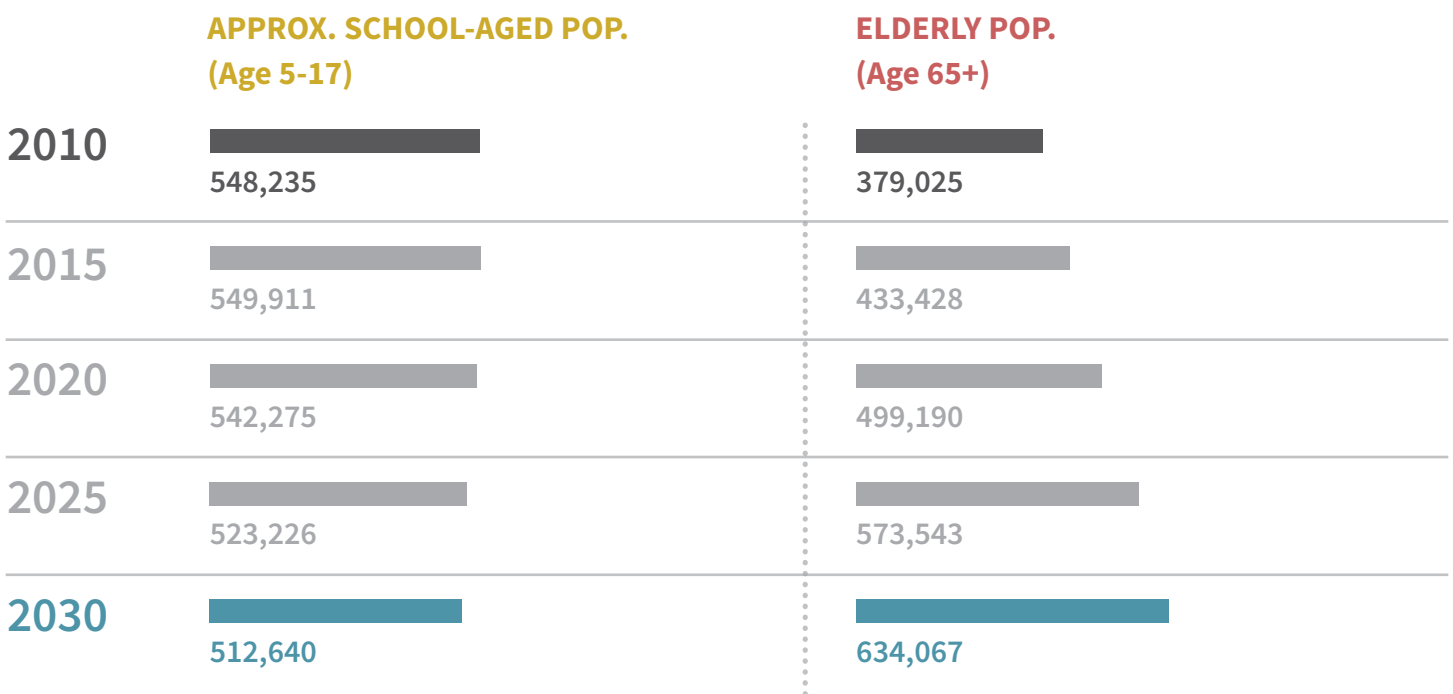## (2010 vs 2030)

MINNESOTA
+16

75%

59%

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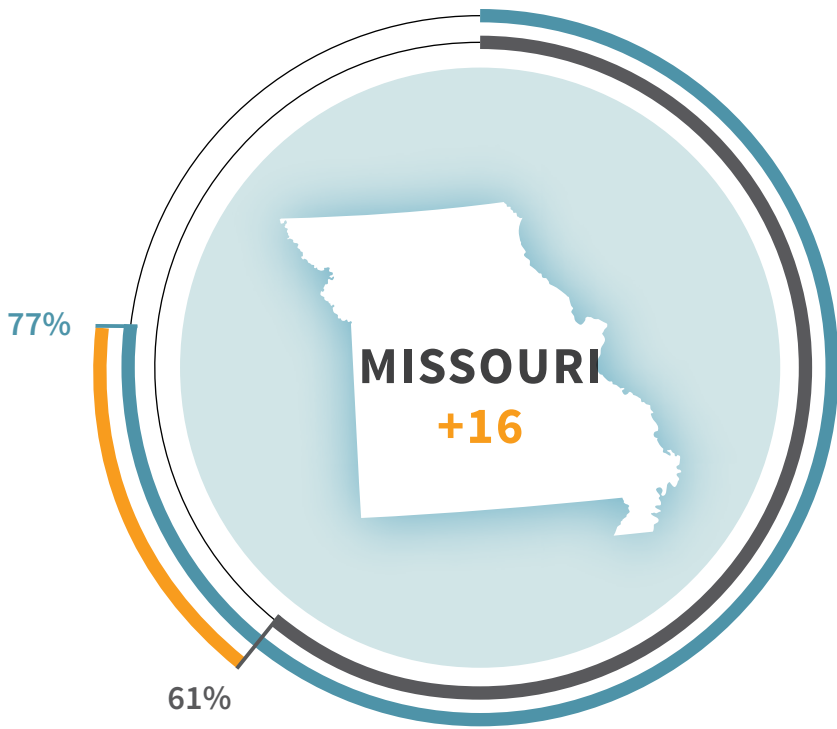
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	920,392	670,429
2015	952,224	774,390
2020	1,007,662	909,950
2025	1,061,013	1,063,116
2030	1,088,756	1,193,124

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

MISSISSIPPI
+15

77%

62%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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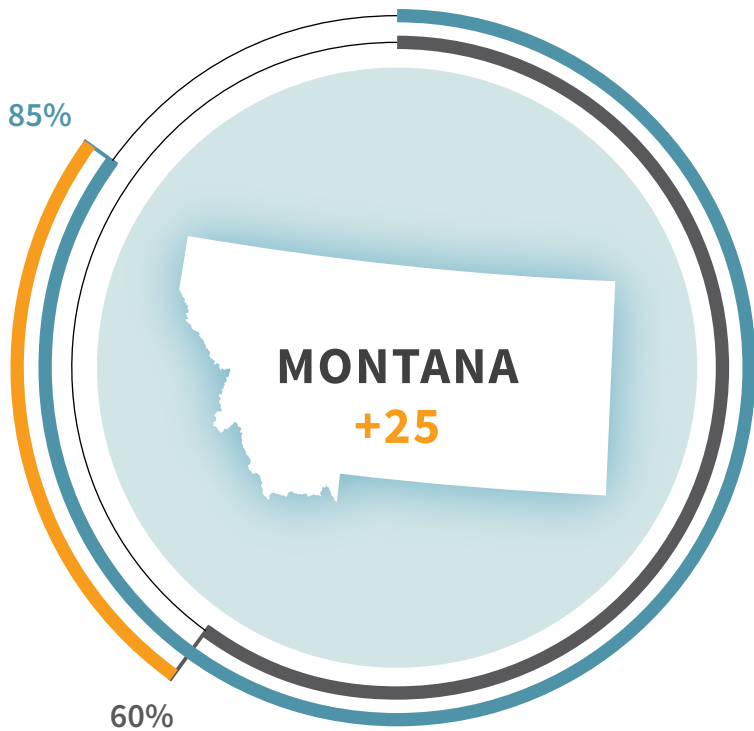
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	548,235	379,025
2015	549,911	433,428
2020	542,275	499,190
2025	523,226	573,543
2030	512,640	634,067

AGE DEPENDENCY RATIO*
(2010 vs 2030)

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.

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MISSOURI
+16

77%

61%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,016,516	821,645
2015	1,034,393	922,418
2020	1,060,182	1,047,071
2025	1,071,708	1,189,605
2030	1,078,644	1,301,714

AGE DEPENDENCY RATIO*
(2010 vs 2030)
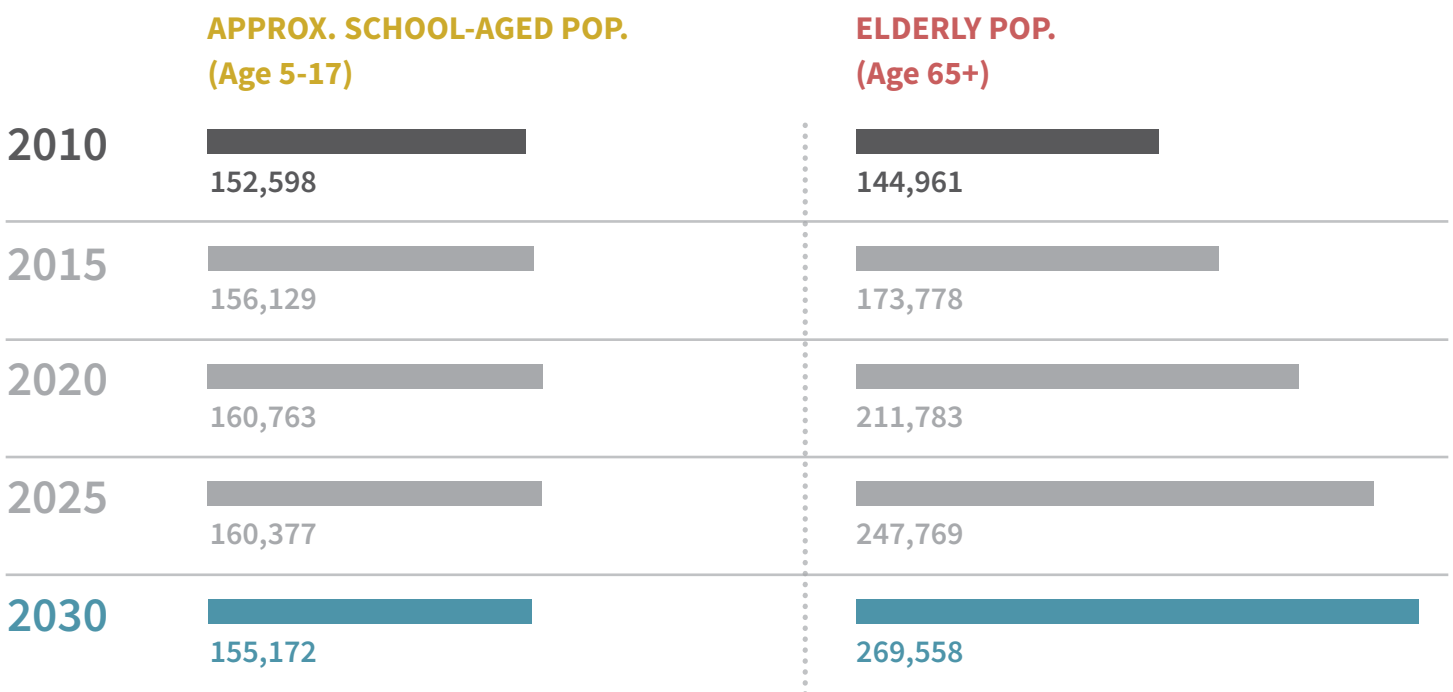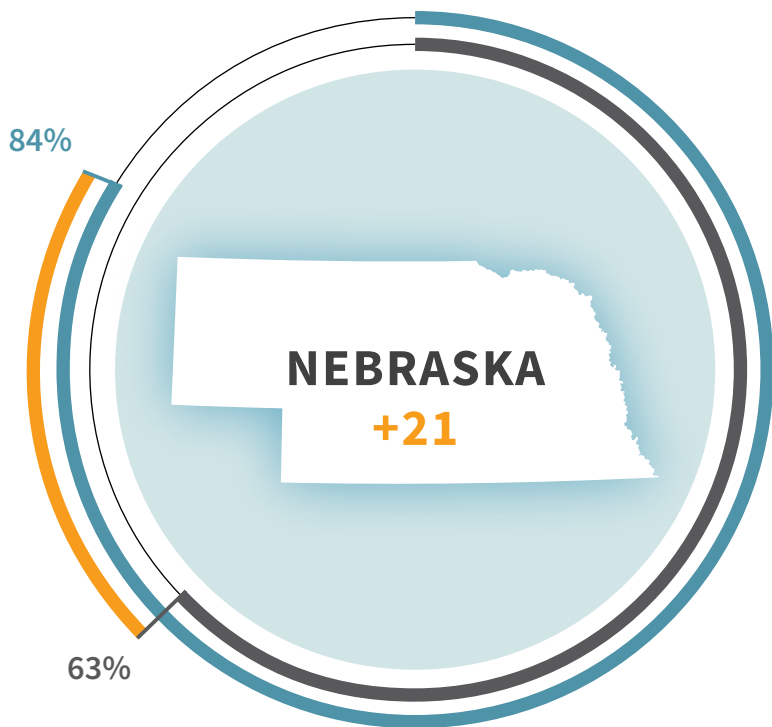
MONTANA
+25

85%

60%

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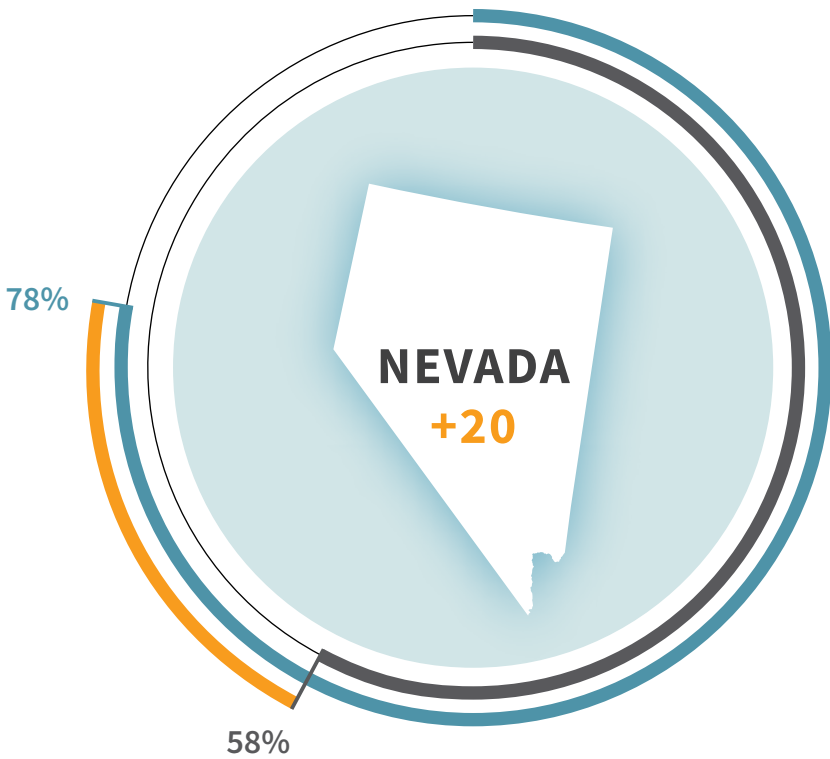
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	152,598	144,961
2015	156,129	173,778
2020	160,763	211,783
2025	160,377	247,769
2030	155,172	269,558

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

84%

63%

NEBRASKA
+21

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	318,450	243,313
2015	326,310	271,379
2020	332,196	308,994
2025	330,817	347,809
2030	329,117	375,811

NEVADA +20

78%

58%

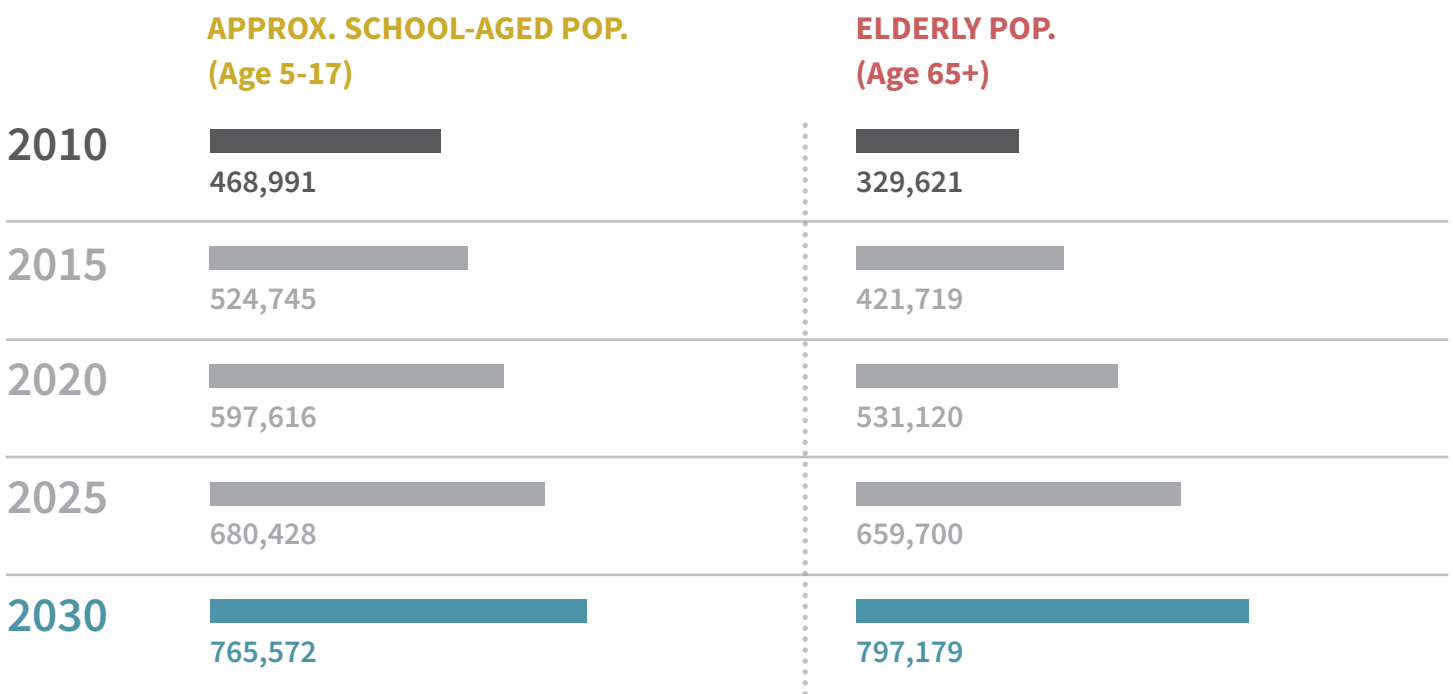## AGE DEPENDENCY RATIO*
(2010 VS 2030)

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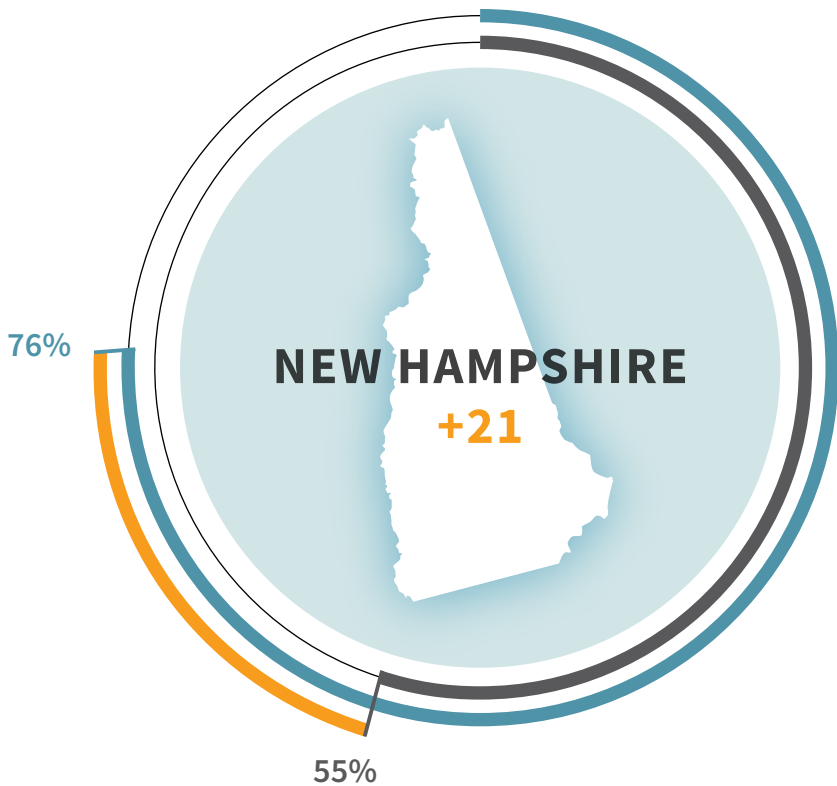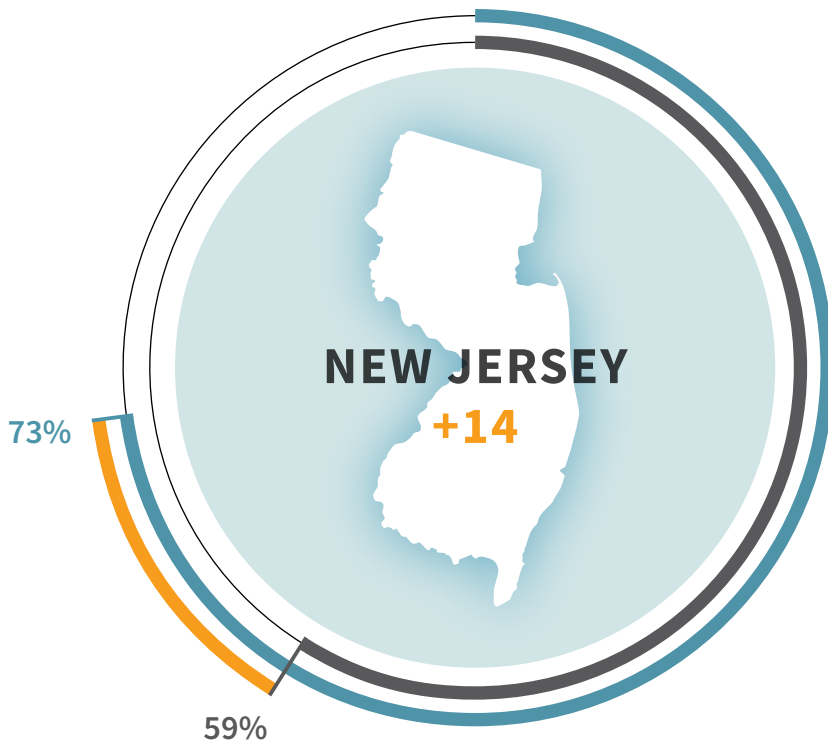
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	468,991	329,621
2015	524,745	421,719
2020	597,616	531,120
2025	680,428	659,700
2030	765,572	797,179

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

NEW HAMPSHIRE +21

76%

55%

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	221,926	178,823
2015	224,993	217,498
2020	238,449	261,856
2025	252,458	311,456
2030	261,750	352,786

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 VS 2030)

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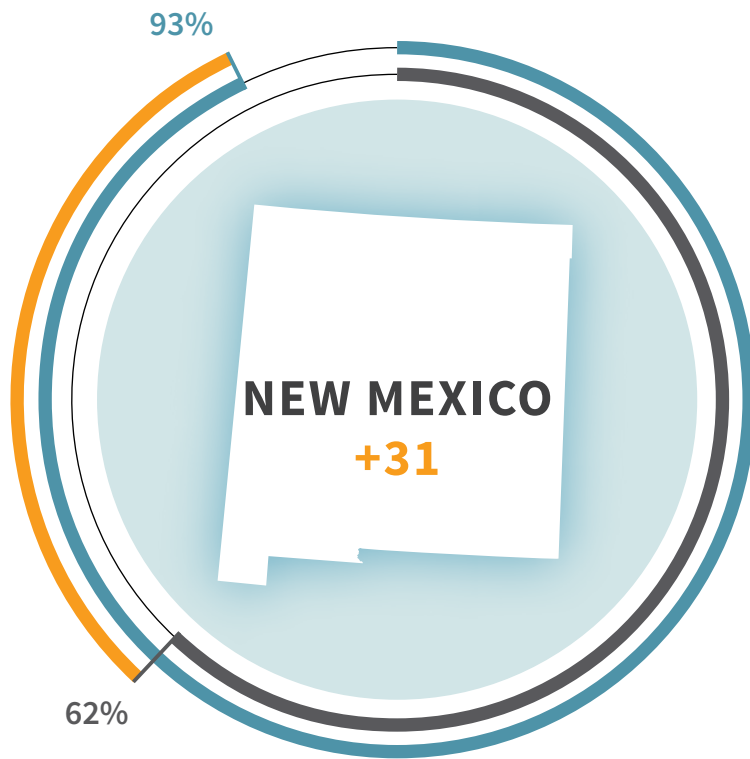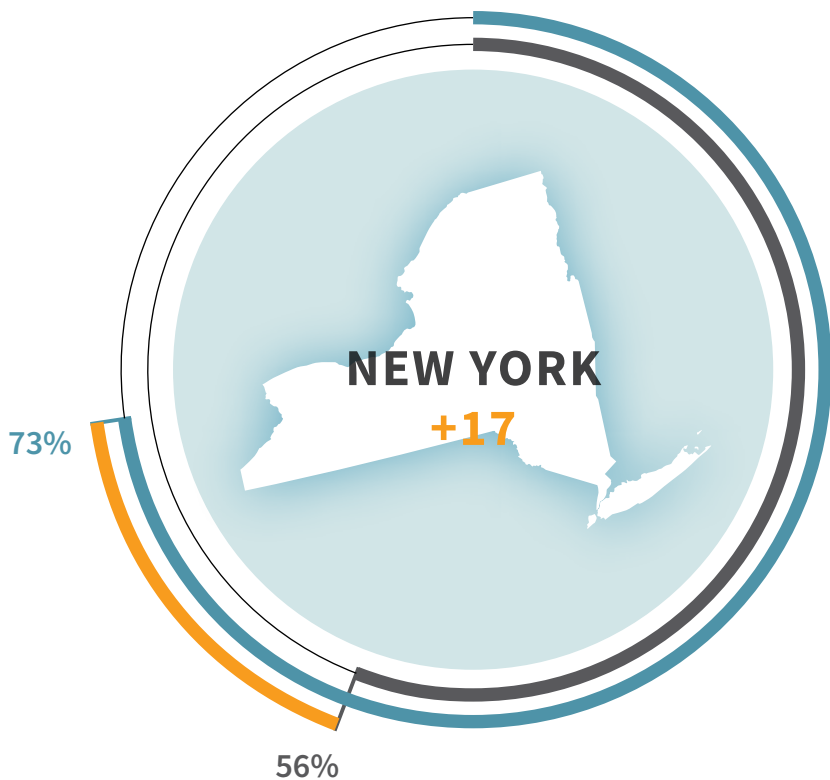
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NEW JERSEY
+14

73%

59%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,501,004	1,231,585
2015	1,501,597	1,385,167
2020	1,526,729	1,552,544
2025	1,546,431	1,762,460
2030	1,563,534	1,959,545

93%

NEW MEXICO
+31

62%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	**ELDERLY POP.** (Age 65+)
2010	334,342	278,967
2015	339,246	343,622
2020	349,690	419,690
2025	346,378	497,357
2030	328,596	555,184

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

Age dependency ratios serve as a measure of societal strain because both younger and older people utilize public services for education and health care. Essentially, it is a measure of the number of people riding in the cart compared to the number pushing the cart.

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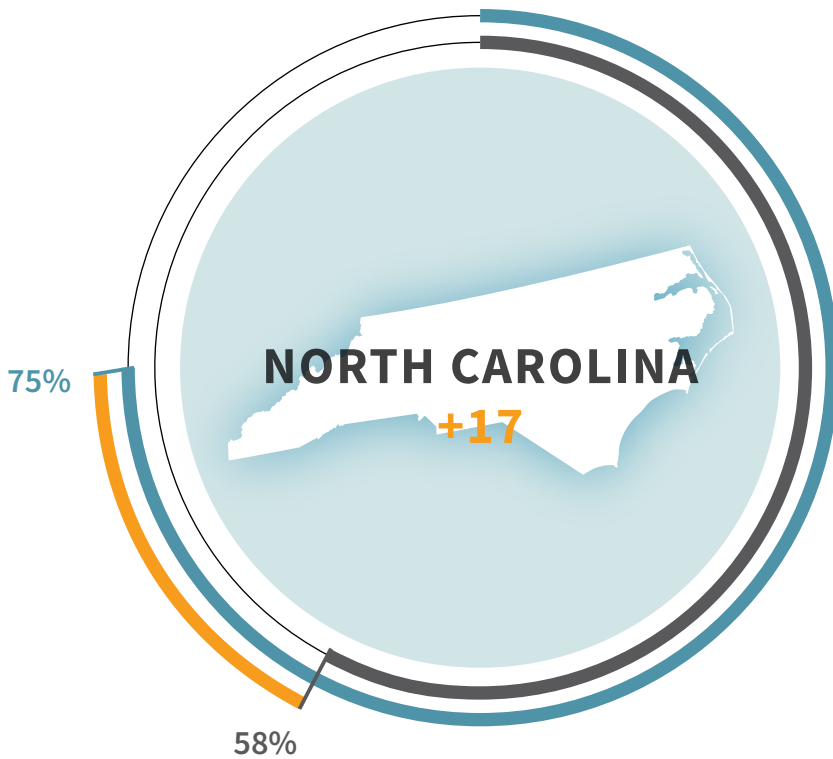
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NEW YORK

+17

73%

56%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	3,170,009	2,651,655
2015	3,082,251	2,943,496
2020	3,107,262	3,250,020
2025	3,123,356	3,606,687
2030	3,110,440	3,916,891

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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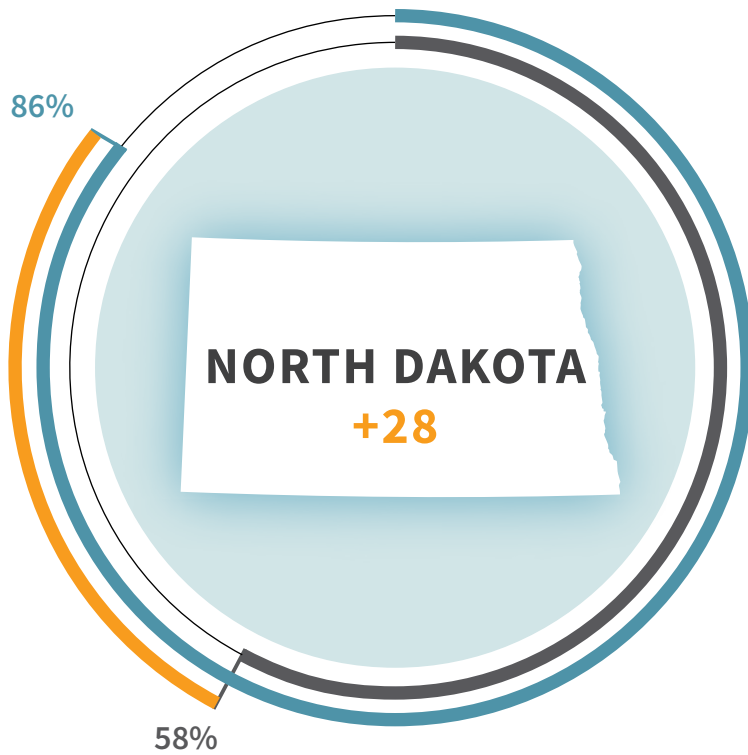
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NORTH CAROLINA

+17

75%

58%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,623,694	1,161,164
2015	1,740,347	1,374,754
2020	1,864,450	1,618,578
2025	2,005,748	1,897,902
2030	2,183,119	2,173,173

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

86%

58%

NORTH DAKOTA
+28

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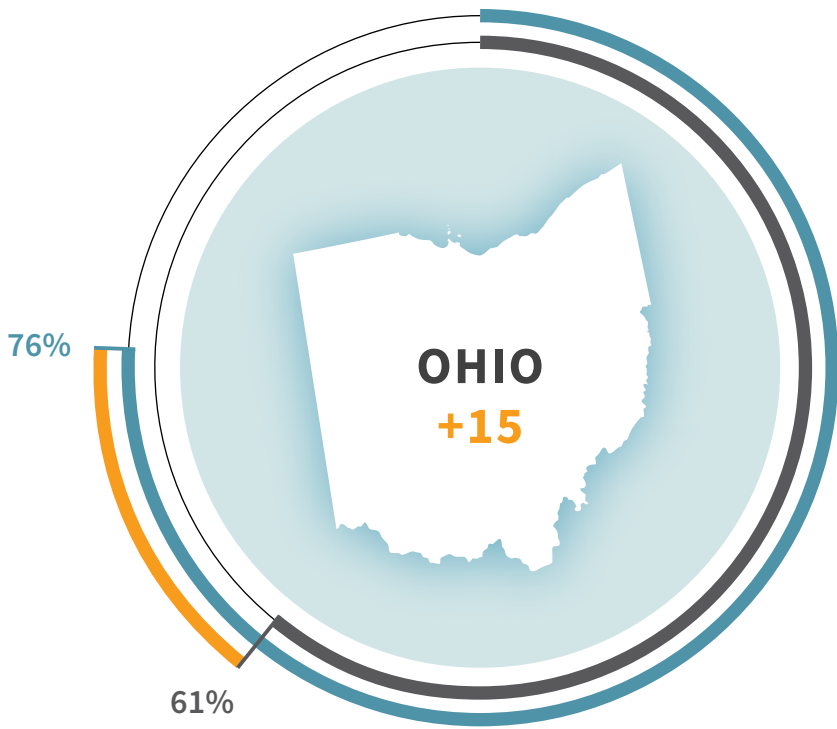
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	103,095	97,108
2015	100,212	107,900
2020	100,607	125,023
2025	98,467	142,195
2030	93,861	152,358

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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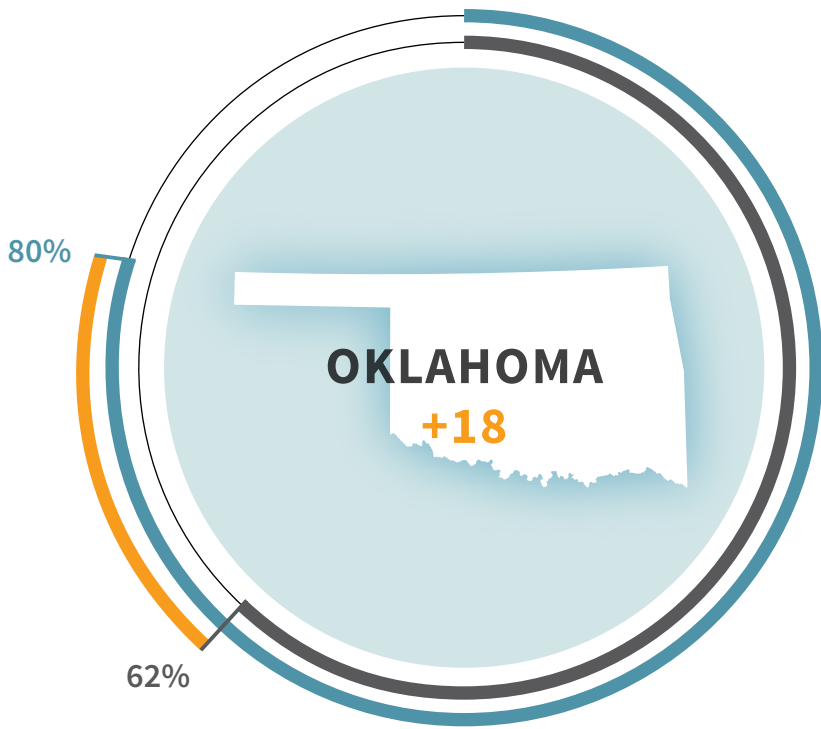
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OHIO
+15

76%

61%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,984,331	1,586,981
2015	1,962,589	1,766,239
2020	1,959,902	1,978,464
2025	1,941,941	2,206,698
2030	1,907,681	2,357,022

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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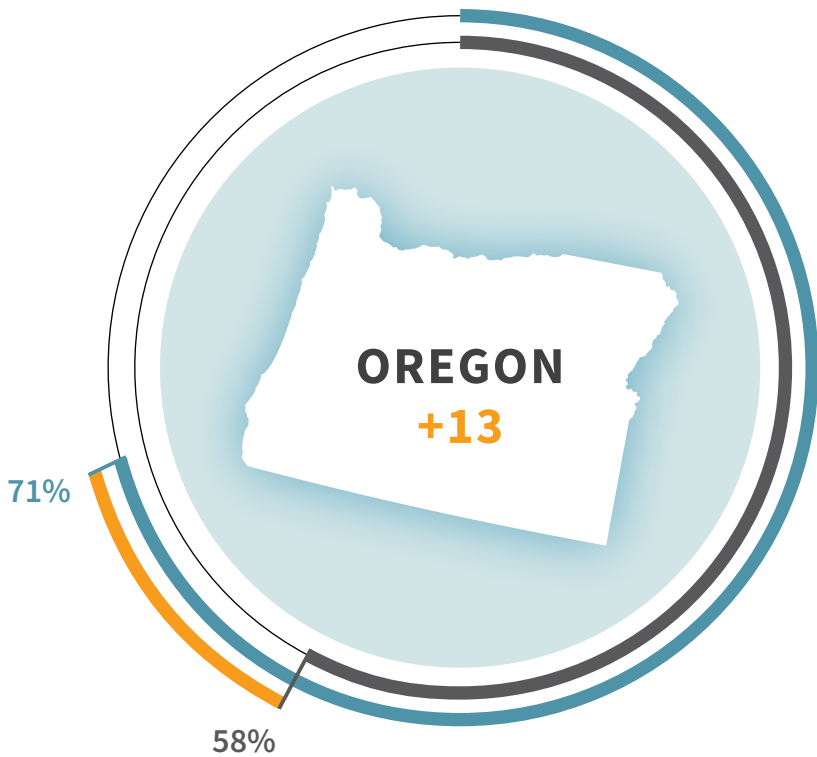
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	640,391	494,966
2015	661,054	553,761
2020	678,391	625,384
2025	685,617	702,307
2030	700,929	757,553

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

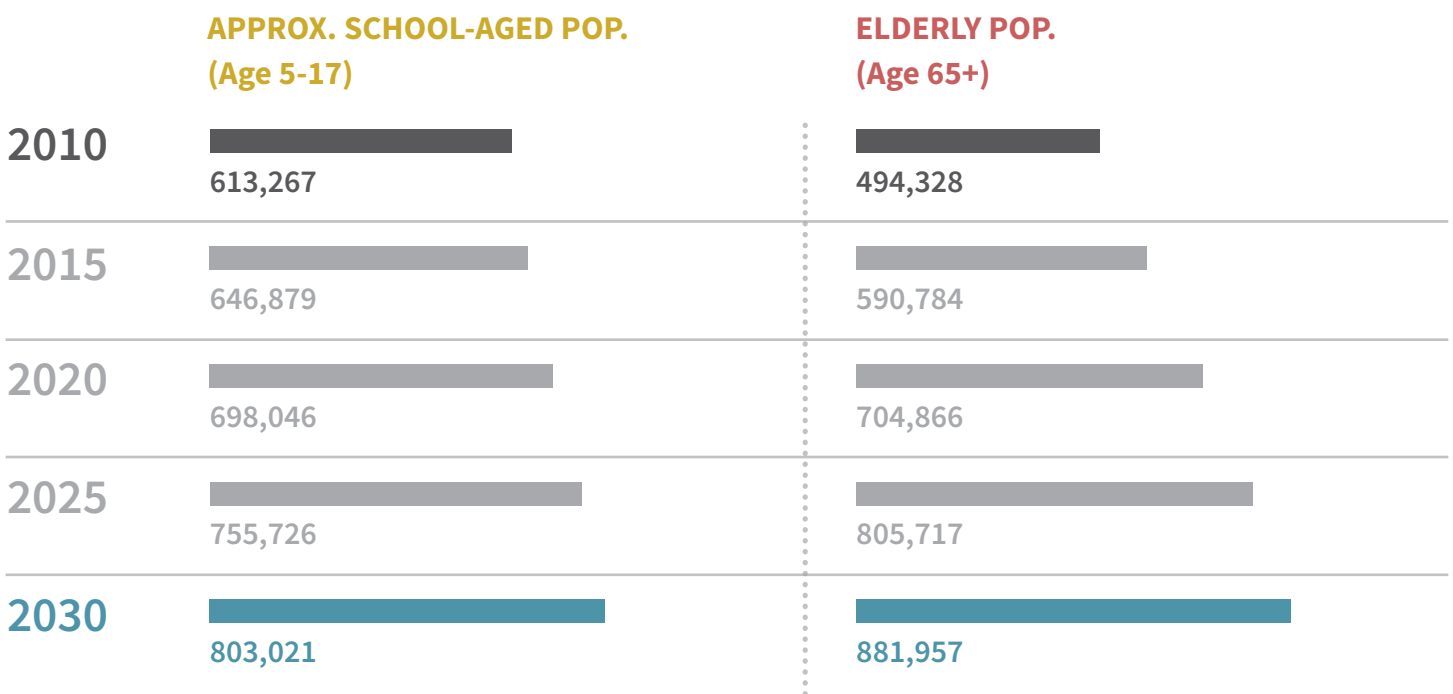## AGE DEPENDENCY RATIO*
(2010 vs 2030)

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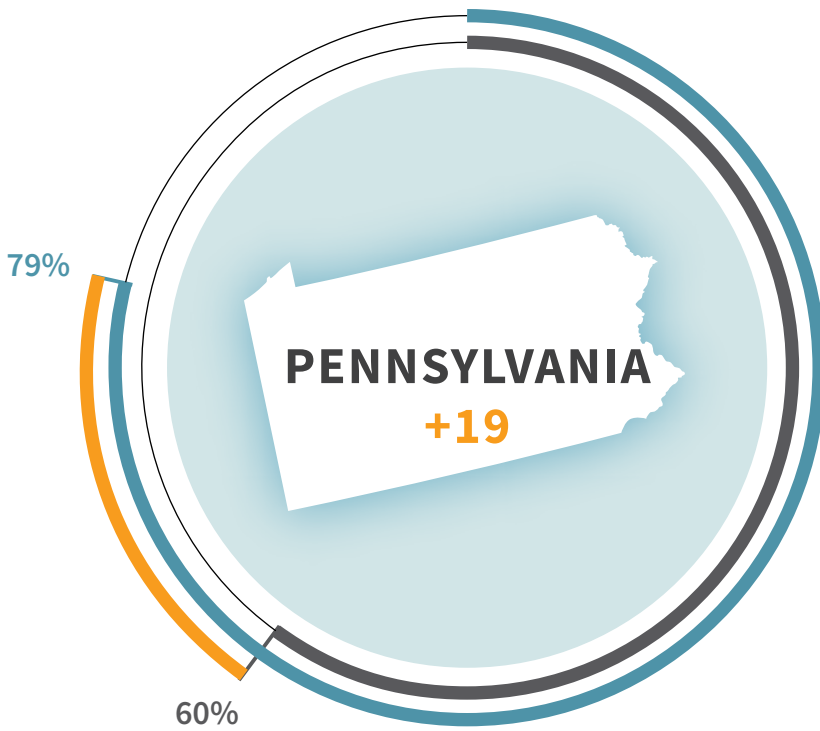
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OREGON
+13

71%

58%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	613,267	494,328
2015	646,879	590,784
2020	698,046	704,866
2025	755,726	805,717
2030	803,021	881,957

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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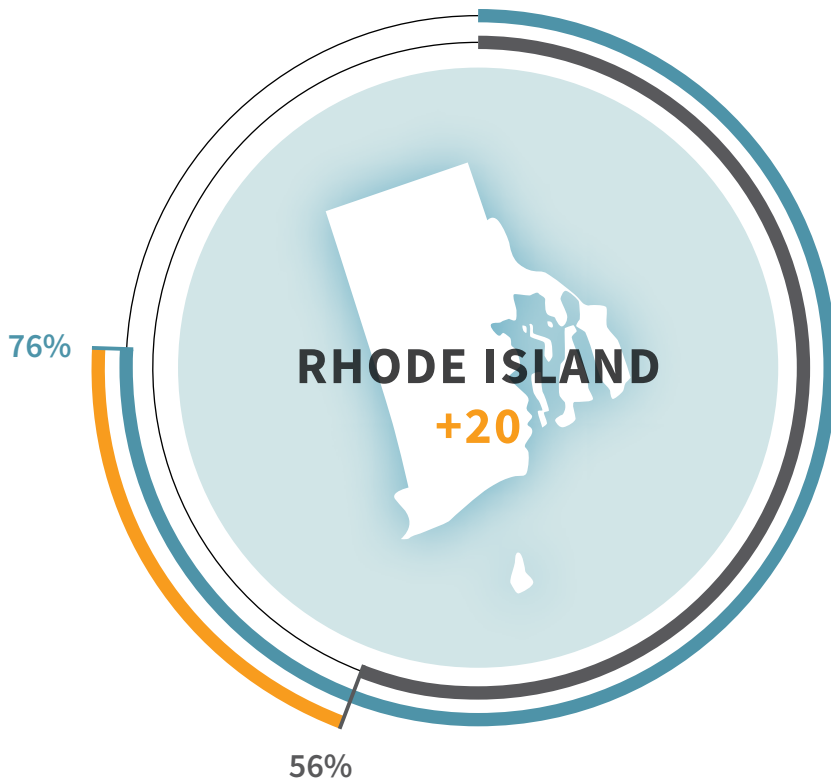
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

The 5-17 population grouping available from Census data most closely approximates the public school population. It is clear a massive influx of new students is on the way. Coupled with the vast increase in the elderly population, state policymakers should expect to wrestle with increased demand for public education and health care spending compounded by slower tax revenue growth.

	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	2,001,077	1,956,235
2015	1,971,108	2,148,982
2020	2,007,437	2,403,118
2025	2,032,363	2,688,781
2030	2,011,988	2,890,068

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

RHODE ISLAND
+20

76%

56%

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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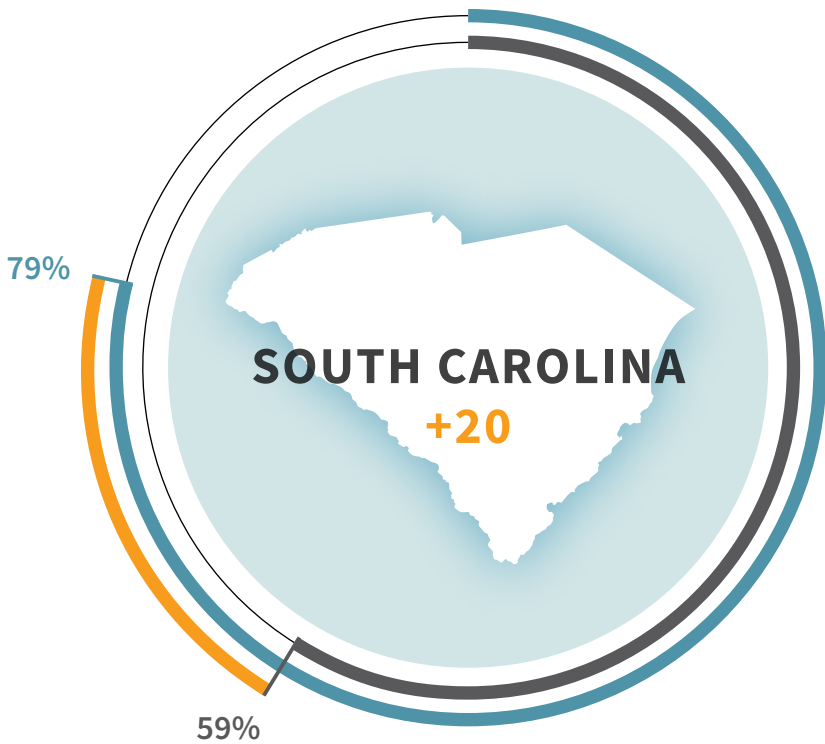
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	183,080	157,358
2015	178,471	175,242
2020	183,046	197,972
2025	187,745	224,508
2030	187,296	246,507

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

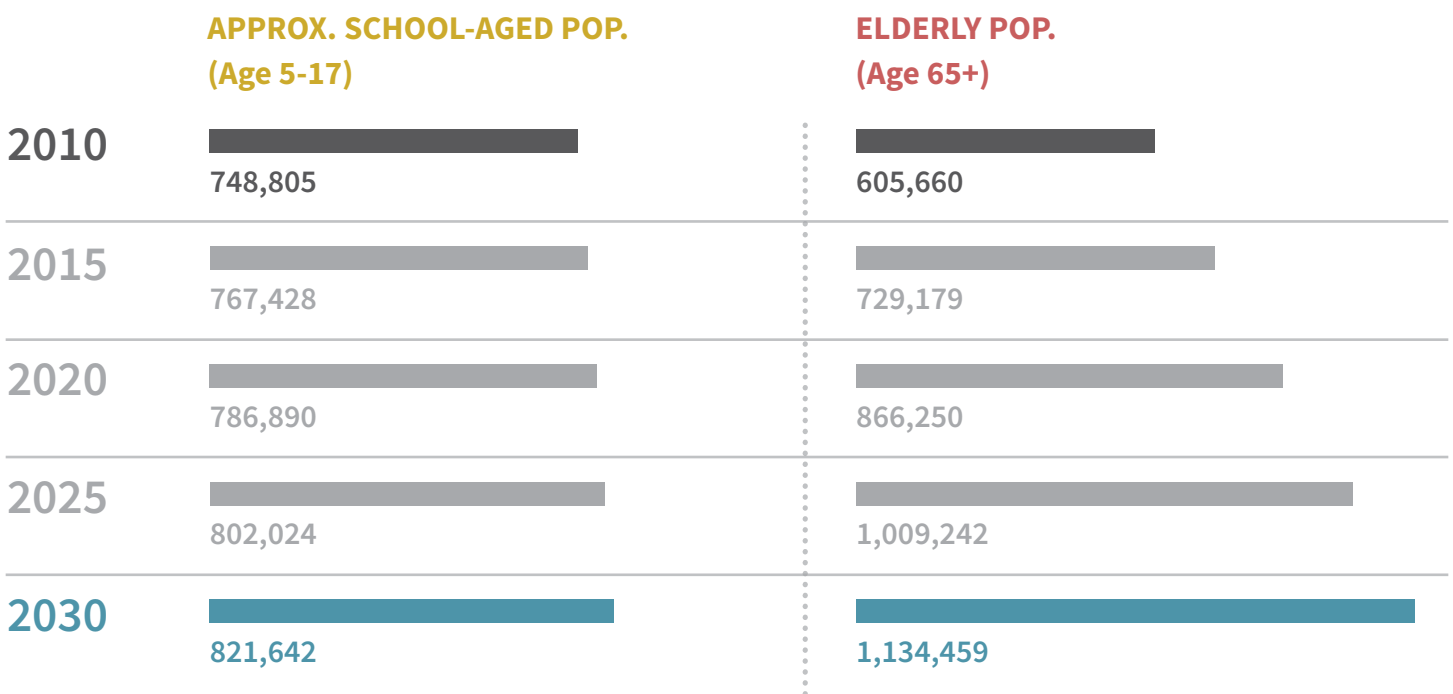## AGE DEPENDENCY RATIO*
(2010 vs 2030)

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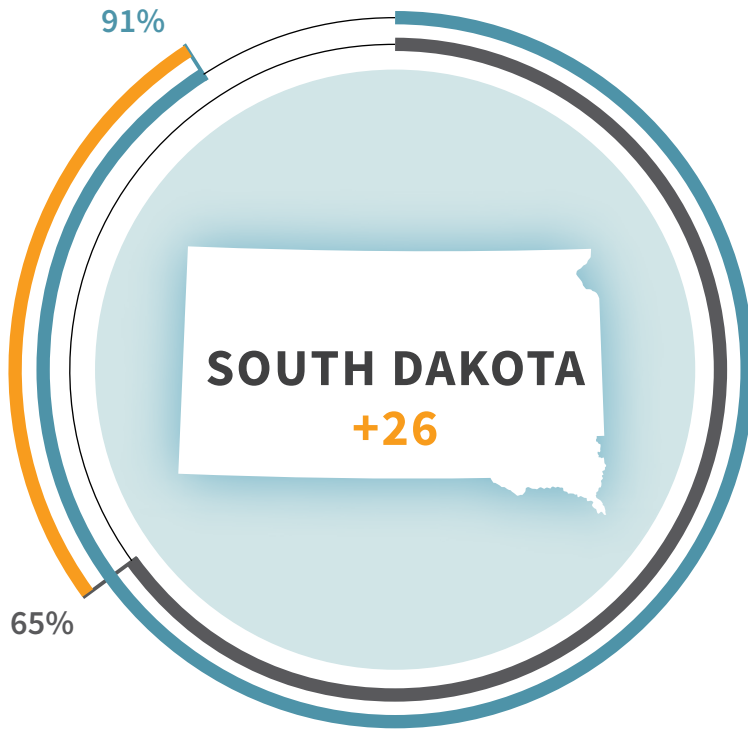
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SOUTH CAROLINA
+20

79%

59%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	748,805	605,660
2015	767,428	729,179
2020	786,890	866,250
2025	802,024	1,009,242
2030	821,642	1,134,459

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

91%

65%

SOUTH DAKOTA
+26

AGE DEPENDENCY RATIO*
(2010 VS 2030)

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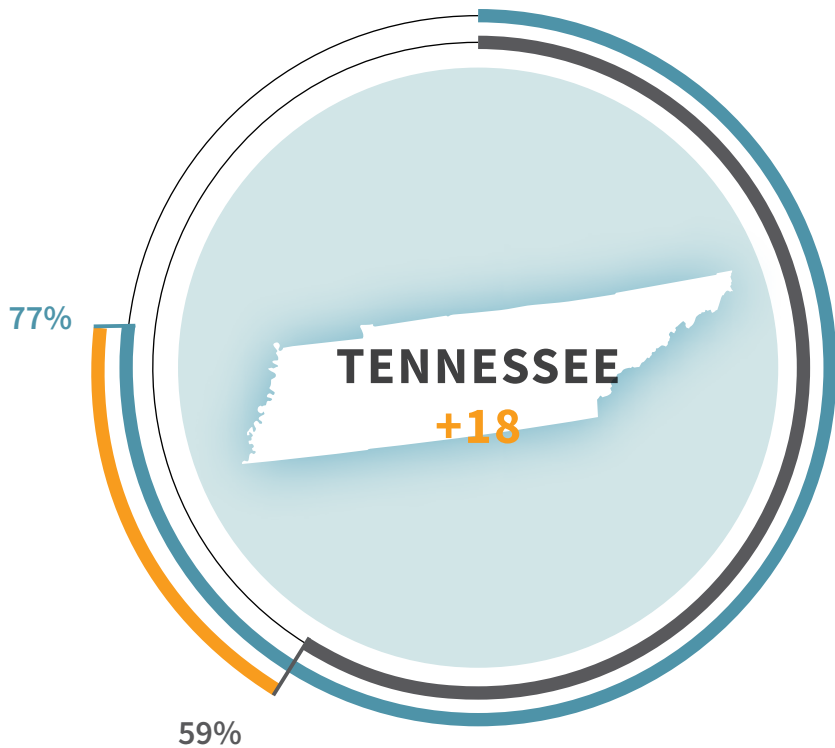
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	139,534	114,459
2015	141,981	127,974
2020	144,085	148,398
2025	143,284	169,663
2030	141,609	185,064

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

AGE DEPENDENCY RATIO*
(2010 vs 2030)

77%
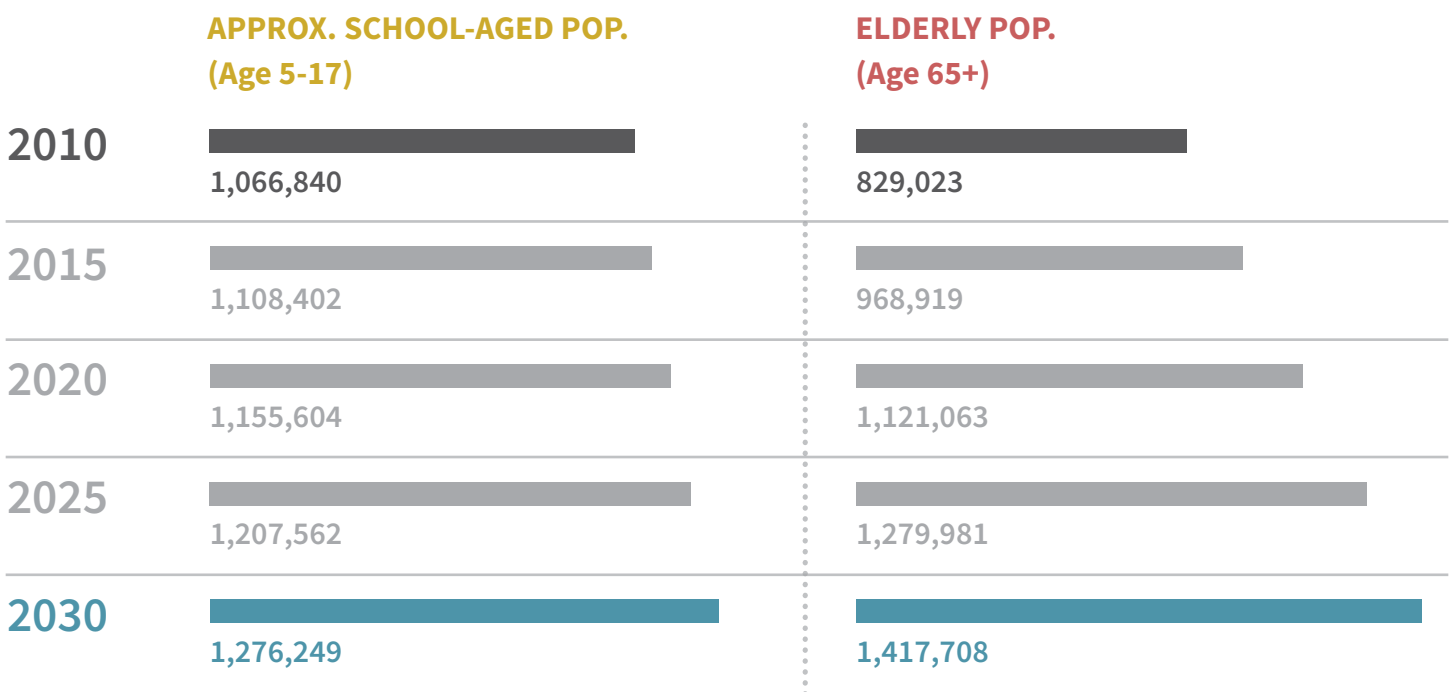
TENNESSEE
+18

59%

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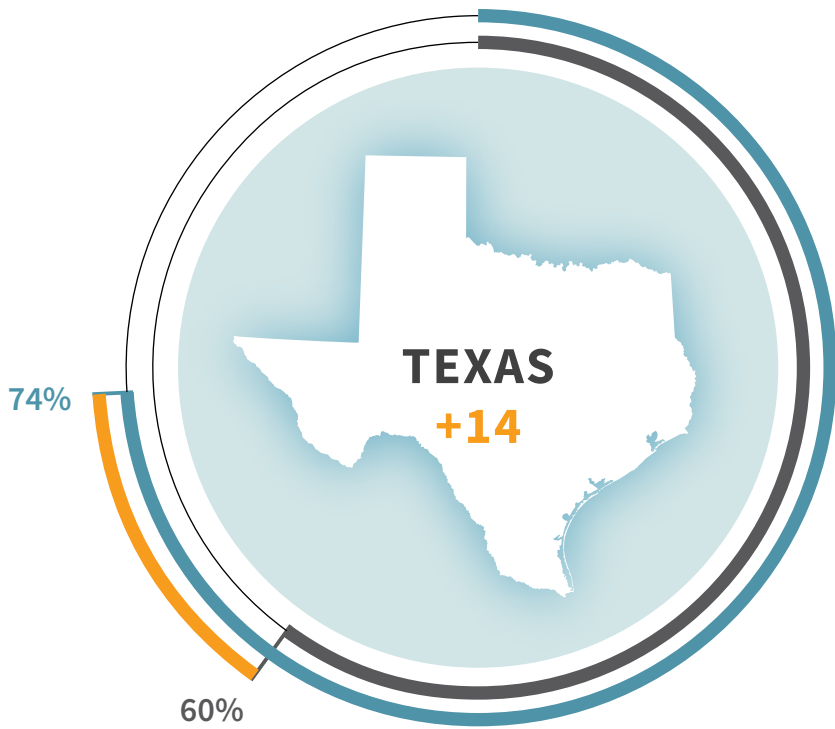
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,066,840	829,023
2015	1,108,402	968,919
2020	1,155,604	1,121,063
2025	1,207,562	1,279,981
2030	1,276,249	1,417,708

AGE DEPENDENCY RATIO*
(2010 vs 2030)

TEXAS
+14

74%

60%

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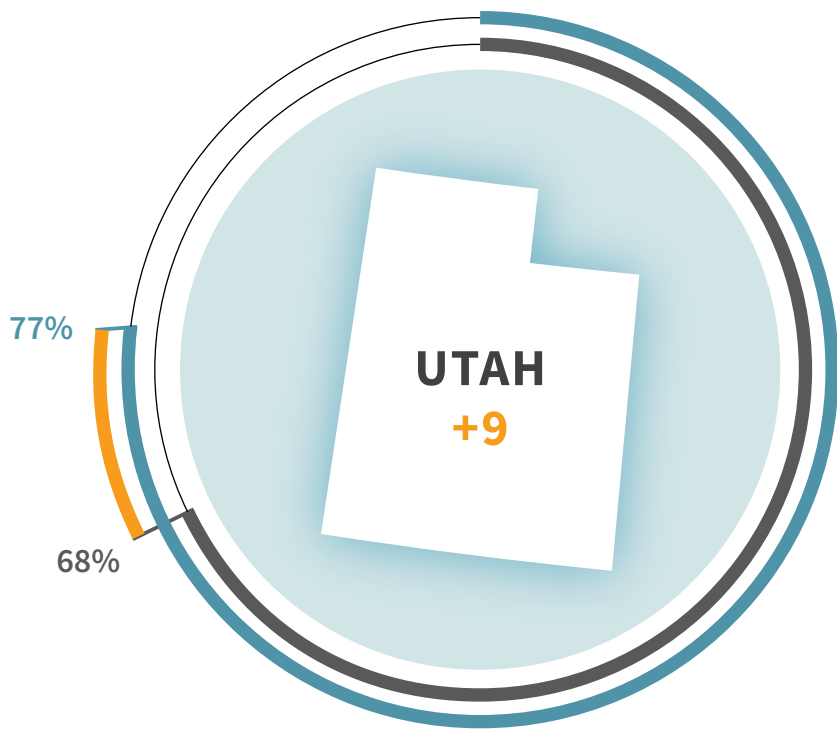
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	4,708,080	2,587,383
2015	5,182,863	3,112,883
2020	5,676,403	3,755,814
2025	6,026,766	4,500,152
2030	6,374,355	5,186,185

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

77%

68%

UTAH
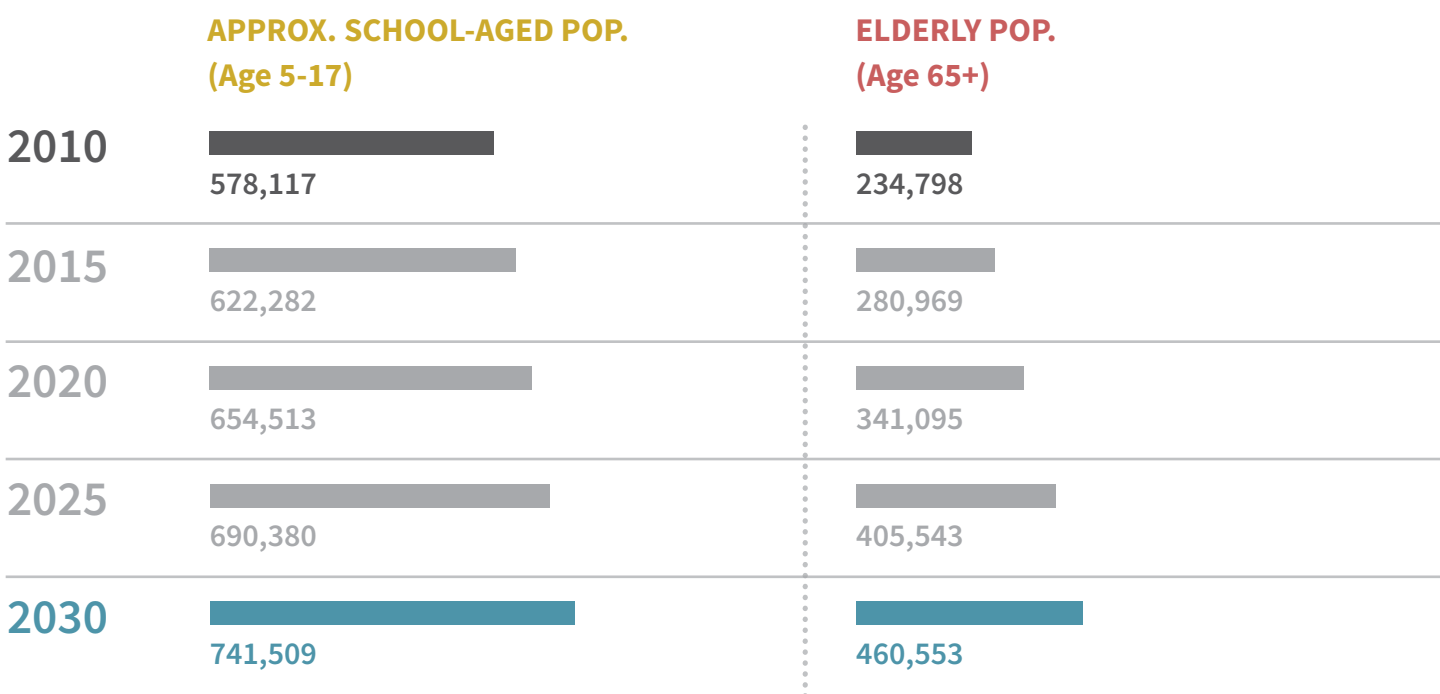**+9**

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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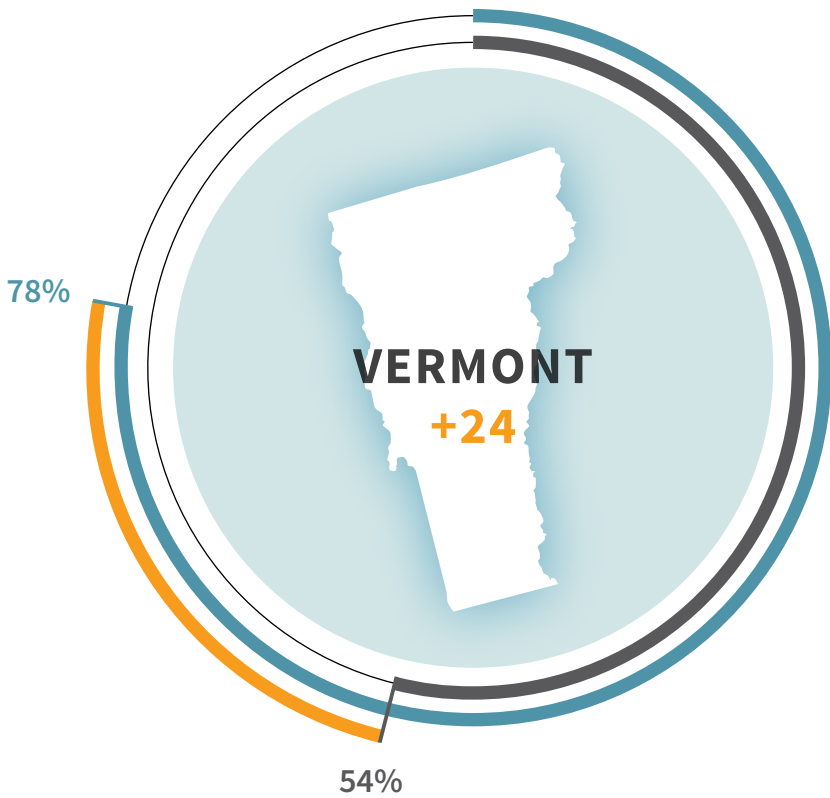
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	**ELDERLY POP.** (Age 65+)
2010	578,117	234,798
2015	622,282	280,969
2020	654,513	341,095
2025	690,380	405,543
2030	741,509	460,553

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

VERMONT
+24

78%

54%

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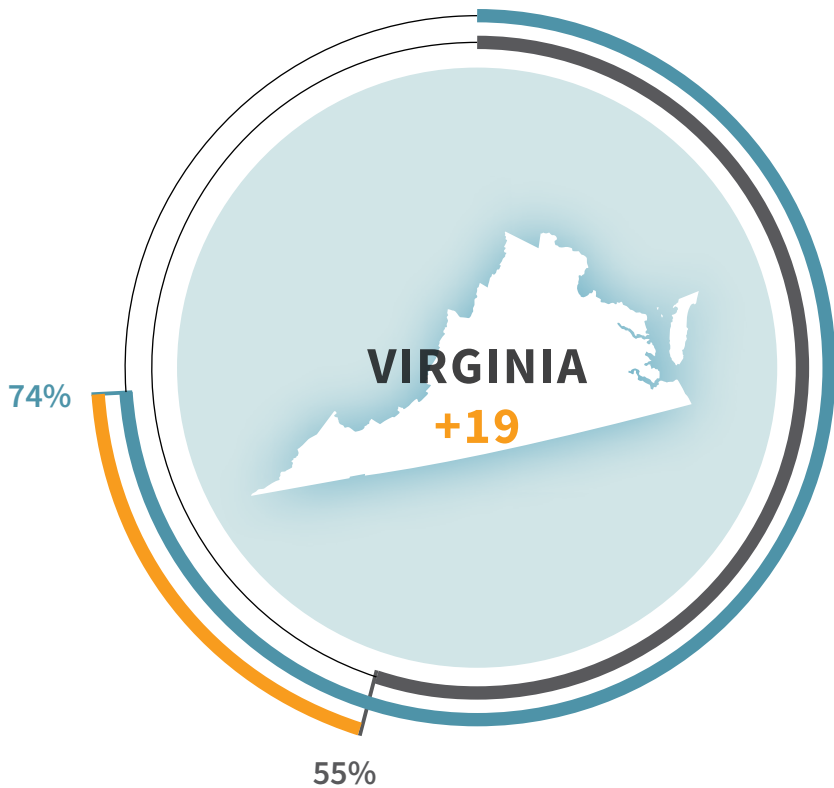
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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	98,069	93,442
2015	95,192	113,487
2020	98,857	136,449
2025	103,963	158,159
2030	104,292	173,940

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
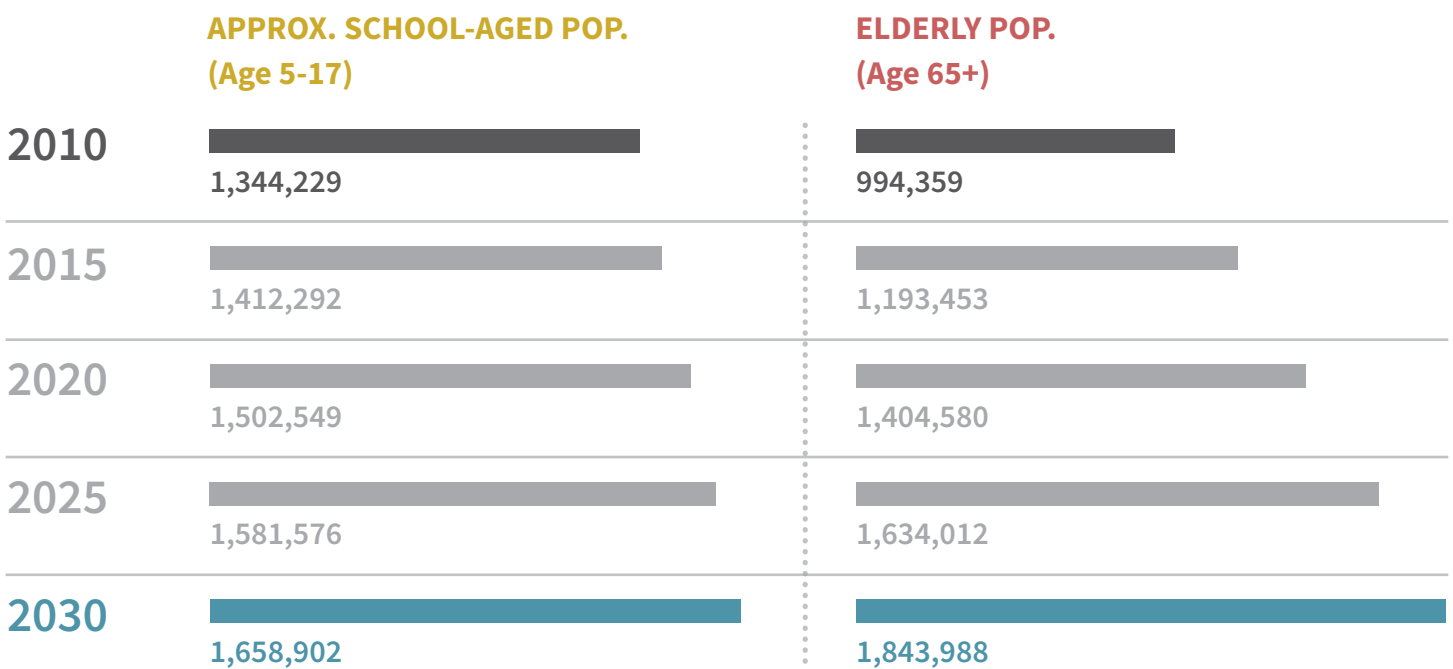## (2010 vs 2030)

VIRGINIA
+19

74%

55%

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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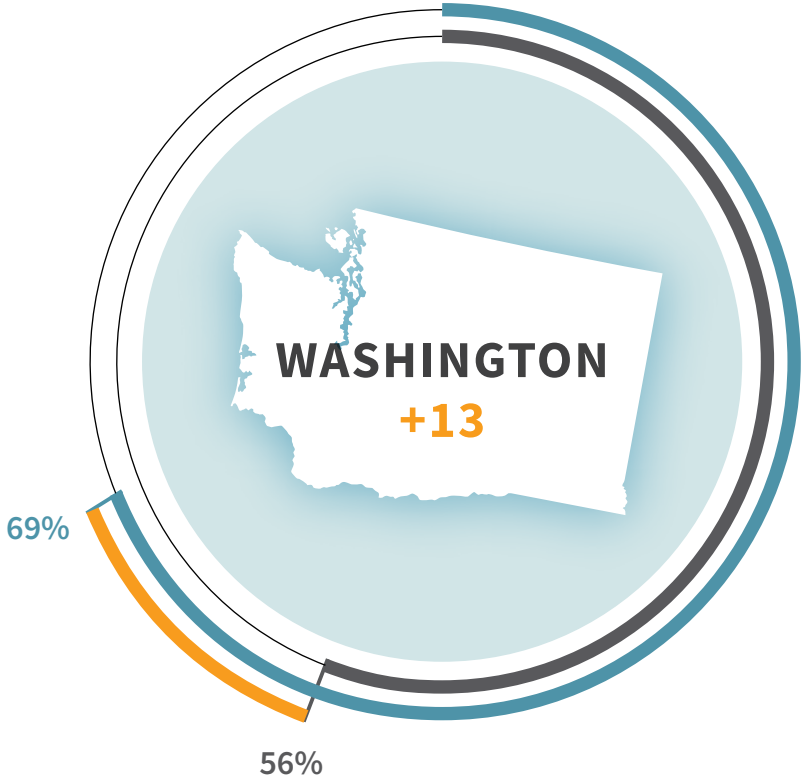
	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,344,229	994,359
2015	1,412,292	1,193,453
2020	1,502,549	1,404,580
2025	1,581,576	1,634,012
2030	1,658,902	1,843,988

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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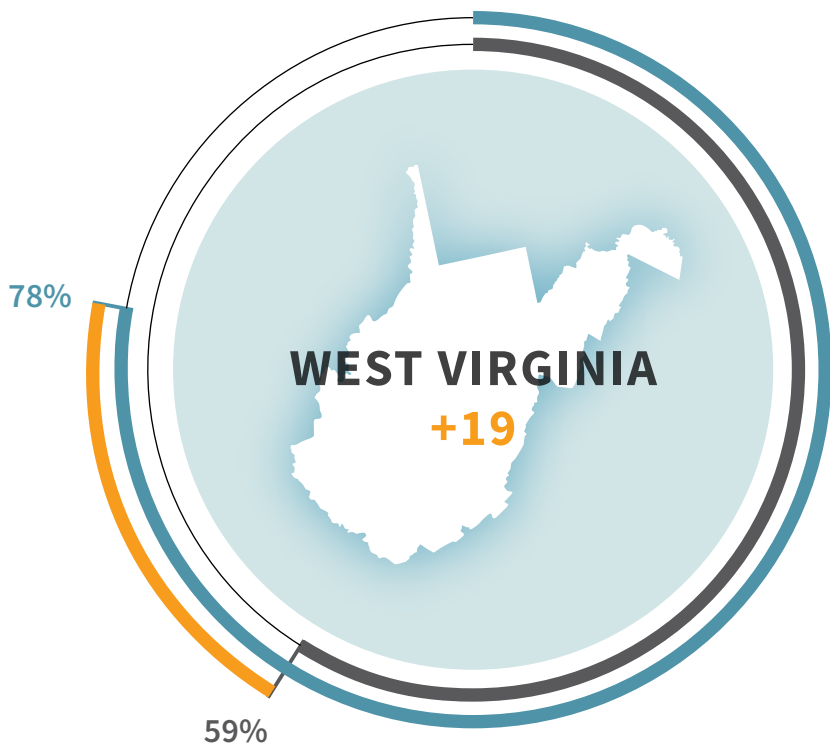
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WASHINGTON +13

69%

56%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	1,061,833	795,528
2015	1,094,776	965,506
2020	1,186,779	1,168,199
2025	1,309,297	1,380,872
2030	1,412,399	1,563,901

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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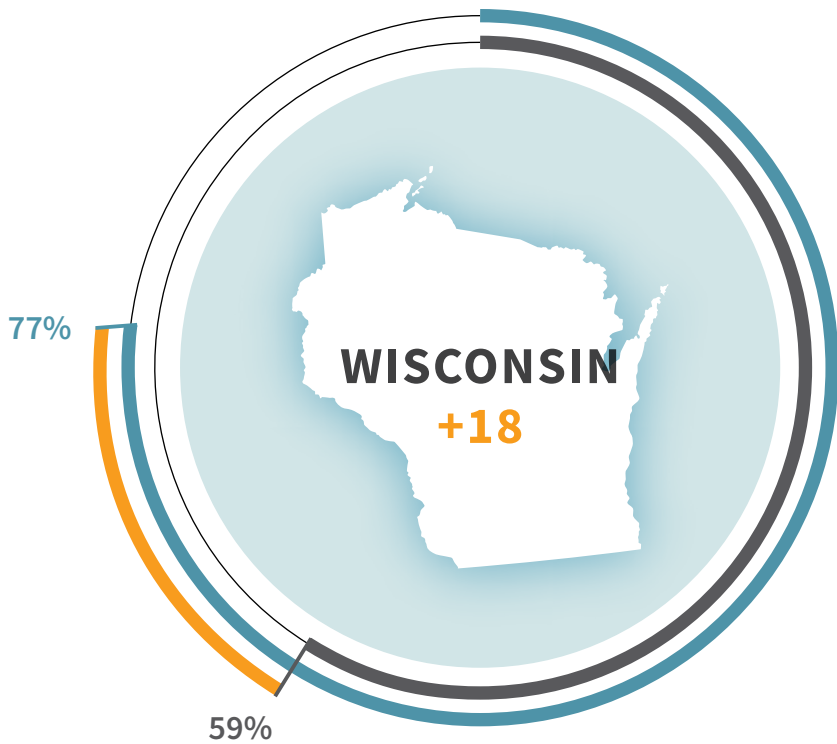
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WEST VIRGINIA +19

78%

59%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	281,176	292,402
2015	277,879	329,775
2020	267,895	372,024
2025	250,406	408,533
2030	237,960	426,443

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

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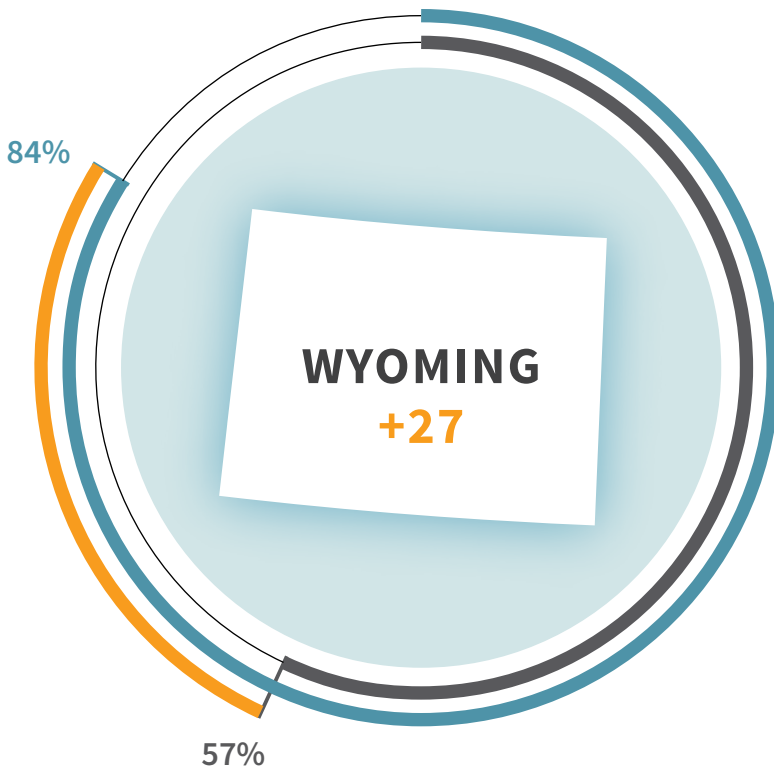
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WISCONSIN
+18

77%

59%

GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	951,577	771,993
2015	962,846	881,745
2020	991,290	1,025,542
2025	1,008,744	1,183,596
2030	999,194	1,312,225

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

AGE DEPENDENCY RATIO*
(2010 vs 2030)

WYOMING
+27

84%

57%

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GROWTH OF SCHOOL-AGED AND ELDERLY POPULATIONS

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	APPROX. SCHOOL-AGED POP. (Age 5-17)	ELDERLY POP. (Age 65+)
2010	83,602	72,658
2015	84,703	88,842
2020	84,344	109,655
2025	79,843	128,605
2030	74,116	138,586

U.S. CENSUS BUREAU, POPULATION DIVISION, INTERIM STATE POPULATION PROJECTIONS, 2005

Appendix

About the Author

Dr. Matthew Ladner is the Senior Advisor of Policy and Research for the Foundation for Excellence in Education. Ladner has written numerous studies on school choice, charter schools and special education reform and coauthored Report Card on American Education: Ranking State K-12 Performance, Progress and Reform for the American Legislative Exchange Council. Ladner has testified before Congress, the United States Commission of Civil Rights and numerous state legislative committees. Ladner is a graduate of the University of Texas at Austin and received both a Masters and a Ph.D. in Political Science from the University of Houston. Ladner is a Senior Fellow with the Foundation for Educational Choice. He lives in Phoenix, AZ with his wife Anne and children Benjamin, Jacob and Abigail.

Foundation for Excellence in Education

ExcelinEd.org

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