



Arizona K-12 School Finance Statistics

PROVIDING CONTEXT TO A COMPLEX MEASUREMENT

Arguably no single statistic dominates Arizona’s public finance debate more than it’s K-12 M&O per pupil expenditure ranking. Arizona has consistently ranked low for decades and the statistic is used as a rallying cry to increase education spending; often suggesting the low ranking is causal to education outcomes. This white paper will explain the statistics in detail, contextualizing education spending in an effort to allow for proper comparisons between states.

What do Nevada, Georgia, Tennessee, Arkansas, Texas and Arizona all have in common?

While it remains true that Arizona ranks low in expenditures per pupil for K-12 education- and will for the foreseeable future regardless of feasible policy changes; Arizona is certainly in good company. Since the Census Bureau (CB) began tracking M&O spending, Arizona has consistently ranked in the top 10 states who increased dollars to their entire K-12 education system. Many growth states can be found in this ranking. Six of the top 10 growth states end up in the bottom third of per-pupil expenditures. How can states leading in percentage increases still end up at the bottom?

Percentage increase K-12 GF spending since 1992 (CB)

1	Nevada	276.7%
2	Georgia	213.1%
3	Arkansas	192.5%
4	Massachusetts	184.3%
5	Delaware	183.8%
6	Tennessee	183.7%
7	New Hampshire	181.3%
8	Texas	177.3%
9	Arizona	172.5%
10	Illinois	170.8%

← 6 of the top 10

End up in the
bottom 1/3 →

34	Arkansas	9,616
35	California	9,595
36	Indiana	9,548
37	Kentucky	9,312
38	Georgia	9,202
39	Alabama	9,028
40	Colorado	8,985
41	South Dakota	8,881
42	Florida	8,755
43	Tennessee	8,630
44	Texas	8,593
45	North Carolina	8,512
46	Nevada	8,414
47	Mississippi	8,263
48	Oklahoma	7,829
49	Arizona	7,528
50	Idaho	6,621
51	Utah	6,500

2014 per pupil K-12 GF spending (CB)

How Much Money Is Available?

Beginning with the numerator in expenditures per pupil, states must be analyzed for their relative wealth which provides the tax base. It would be unreasonable to directly compare the wealth of Vermont with Arkansas. Personal income is the “aggregate income from all sources received by persons residing in a state, and it has a significant effect on the total income or financial resources available to governmental jurisdictions through taxation.”ⁱ Historically, Arizona has had a Per Capita Income ranking below the national average, and despite significant economic gains during the past 20 years, did not witness a similar rise in rank because of strong population growth.

Income per student is perhaps a more important measure. The wealth in the economy must be taxed and then divided amongst the students. Again, due to strong growth, Arizona has routinely landed low on this list, as have other growth states such as Utah, Texas, and Nevada. As the National Education Association (NEA) puts it, “the amount of total personal income available affects the prospects for financing public education.”ⁱⁱⁱ Arizona ranks #46 in income per student; it doesn’t mean Arizona is a poor state but rather has many mouths to feed.

Per Capita Income, 2013

37.	NEVADA	39,235
38.	MICHIGAN	39,055
39.	NORTH CAROLINA	38,683
40.	INDIANA	38,622
41.	GEORGIA	37,845
42.	ARIZONA	36,983
43.	ARKANSAS	36,698
44.	UTAH	36,640
45.	ALABAMA	36,481
46.	KENTUCKY	36,214
47.	IDAHO	36,146
48.	NEW MEXICO	35,965

Income per student, 2013

38.	ALABAMA	239,722
39.	OKLAHOMA	239,439
40.	KENTUCKY	235,186
41.	WEST VIRGINIA	233,393
42.	SOUTH CAROLINA	232,015
43.	ARKANSAS	230,320
44.	TEXAS	229,313
45.	ARIZONA	229,080
46.	NEVADA	229,076
47.	NEW MEXICO	224,447
48.	GEORGIA	222,085
49.	MISSISSIPPI	205,828
50.	IDAHO	198,153
51.	UTAH	176,972
	MEDIAN	284,646

Are We Trying?

Beyond ability to pay, states can be measured on their “weight of effort” in spending on various programs. How much of the available money in the economy is taxed at the state and local level and how much of it is directed towards public education? Traditionally a conservative state preferring low taxes, it is not surprising that Arizona ranks #38 in weight of effort to tax itself- \$92 per \$1,000 of personal income, just \$7 below the national median. Arizona ranks #17 in state and local tax revenue for public education at \$42 per \$1,000 of personal income, meaning its “weight of effort” is above the national average.ⁱⁱⁱ A fair comparison of a state’s ability and effort to generate funds for education must account for personal income.

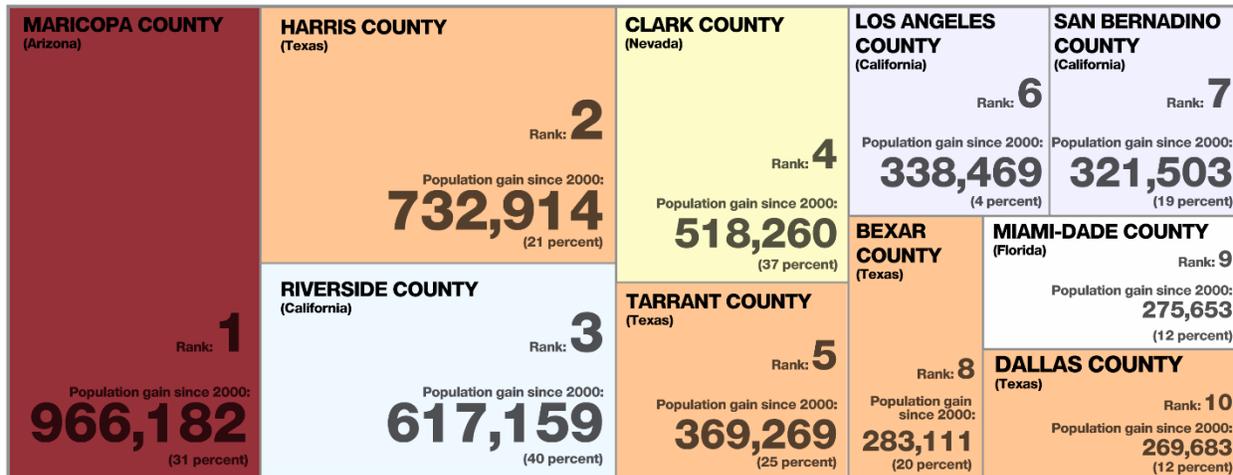
Arizona ranks #17 in state and local tax revenue for public education per \$1,000 of personal income, meaning its “weight of effort” is above the national average.

Demographic Challenges

From a public policy standpoint, Arizona is demographically challenged. In any per capita exercise, the makeup of those *capita* is rather important. Arizona’s rapid population growth is well documented: #3 in the country since 1992. Maricopa County’s population grew more in total persons than any other county during the 2000’s.

Top 10 U.S. counties by population gain

(excluding counties with populations of less than 1 million)



Source: U.S. Census Bureau County Population Estimates.

Cronkite News Service graphic by Heather Billings

But the demographics of growth matter more. Arizona has historically ranked in the top 10 of states in percentage of population under the age of 18. Currently Arizona is #11 with 24.7% under 18 years. Well known for its retirement community, Arizona ranks #12 in percentage of resident population 65 and older, a percentile which continues to increase. This results in Arizona ranking #49 in percentage of resident working age populace age 18-64.^{iv}

A glance at states who routinely top the K-12 per pupil expenditures ranking shows a strong correlation to these charts: D.C., Rhode Island, Vermont, New Hampshire, Massachusetts, New York, Virginia and Maryland have low percentages of youths and a high percentage of working age adults.

% Under 18

% 18-64

% 65+

1	Utah	30.9
2	Texas	26.6
3	Idaho	26.5
4	Alaska	25.6
5	Kansas	25
6	Georgia	24.9
	Nebraska	24.9
8	Mississippi	24.7
9	Oklahoma	24.6
	South Dakota	24.6
11	Arizona	24.4
12	New Mexico	24.3
13	Indiana	24.1
	Louisiana	24.1
15	Arkansas	24
16	California	23.9
17	Nevada	23.7
18	Minnesota	23.6
	Wyoming	23.6
20	Illinois	23.5
	Colorado	23.5
22	Iowa	23.4
	U.S.	23.3
23	North Carolina	23.2
24	Missouri	23.1
	Kentucky	23.1
26	Alabama	23
	Tennessee	23
28	Ohio	22.9
	Washington	22.9
30	Wisconsin	22.8
31	Michigan	22.7
	New Jersey	22.7
	Maryland	22.7
34	South Carolina	22.6
	Virginia	22.6
36	Virginia	22.6
37	North Dakota	22.5
38	Montana	22.1
39	Delaware	22
40	Hawaii	21.9
	Connecticut	21.8
42	Oregon	21.8
43	New York	21.6
44	Pennsylvania	21.3
45	Massachusetts	20.8
	Florida	20.6
47	New Hampshire	20.5
48	Rhode Island	20.4
49	Maine	19.7
50	Vermont	19.6
51	D.C.	17.2

AZ #11
in % of
population
under 18

AZ #12
in % of
population
over 65

AZ #49
in % of
population age
18-64

1	D.C.	71.4
2	Alaska	65.4
3	Massachusetts	64.4
4	Colorado	64.2
	New Hampshire	64.2
	Rhode Island	64.2
7	Vermont	64.1
8	Virginia	64
	New York	64
10	Maryland	63.9
11	California	63.6
12	Washington	63.5
13	North Dakota	63.3
14	Georgia	63.1
15	Connecticut	63
	Illinois	63
17	Wyoming	62.9
	New Jersey	62.9
19	Oregon	62.7
	Louisiana	62.7
21	Maine	62.6
	U.S.	62.6
	Nevada	62.6
23	Hawaii	62.5
	Kentucky	62.5
	Minnesota	62.5
	North Carolina	62.5
27	Tennessee	62.4
	Wisconsin	62.4
	Pennsylvania	62.4
29	Michigan	62.3
31	West Virginia	62.2
	Texas	62.2
33	South Carolina	62.1
	Delaware	62.1
	Alabama	62.1
36	Ohio	62
37	Indiana	61.9
	Missouri	61.9
39	Montana	61.7
40	Mississippi	61.4
41	Oklahoma	61.1
42	Iowa	61
	Kansas	61
	Nebraska	61
	New Mexico	61
46	Florida	60.8
47	Arkansas	60.7
48	South Dakota	60.5
49	Arizona	60.2
50	Idaho	59.6
51	Utah	59.3

1	Florida	18.7
2	Maine	17.7
3	West Virginia	17.3
4	Pennsylvania	16.4
	Vermont	16.4
6	Montana	16.2
7	Delaware	15.9
8	Iowa	15.6
	Hawaii	15.6
10	Rhode Island	15.5
	Oregon	15.5
12	Arizona	15.4
	Arkansas	15.4
	New Hampshire	15.4
15	Connecticut	15.2
	South Carolina	15.2
17	Ohio	15.1
18	Missouri	15
	Michigan	15
20	South Dakota	14.9
	Alabama	14.9
22	Massachusetts	14.8
	Wisconsin	14.8
24	New Mexico	14.7
	Tennessee	14.7
26	New Jersey	14.4
	New York	14.4
	Kentucky	14.4
29	Oklahoma	14.3
	North Carolina	14.3
31	North Dakota	14.2
32	Nebraska	14.1
	U.S.	14.1
33	Kansas	14
34	Indiana	13.9
	Minnesota	13.9
	Mississippi	13.9
37	Idaho	13.8
38	Nevada	13.7
39	Washington	13.6
40	Illinois	13.5
	Wyoming	13.5
42	Maryland	13.4
	Virginia	13.4
44	Louisiana	13.3
45	California	12.5
46	Colorado	12.3
47	Georgia	12
48	D.C.	11.4
49	Texas	11.2
50	Utah	9.8
51	Alaska	9

The implications for such extreme demographic positions are as numerous as they are obvious. The 18-64 population represents the engine of the tax base and it must support a much larger proportion of students than the average. Additionally, the 64+ age demographic has an increased demand for state resources. The polar opposite might be Washington D.C. who is last in percentage of population under 18, #1 in the working demographic, and #48 in those age 64+. Consider the fortunate situation Colorado finds itself, with a healthy percentage of population under age 18 at #20 (23.5%), #4 in percentage age 18-64, and #46 age 65+. A glance at states who routinely top the K-12 per pupil expenditures ranking shows a

strong correlation to these charts: D.C., Rhode Island, Vermont, New Hampshire, Massachusetts, New York, Virginia and Maryland have low percentages of youths and high percentages of working age adults.

The most compelling connection between demographics and per pupil K-12 expenditures is in student growth. As nearly all states have participated in overall K-12 spending increases over the past decades, most of the states who occupy the bottom of per pupil spending are the states who grew the most. Since 1992, Arizona has ranked #2 in student growth. According to the 2014 Census Bureau ranking, it occupies the #49 position in per pupil expenditure ranking. All but two of the fastest growing K-12 population states (above 18% growth) appear in the bottom third of per-pupil expenditures. The two exceptions, Virginia and Washington, rank high in percentage population age 18-64 at #8 and #12. They also rank higher than the other growth states in personal income per student at #14 and #15, respectively.

Student Growth

Student Growth '92-'14		
1	Nevada.....	104.93%
2	Arizona.....	63.04%
3	Colorado.....	45.51%
4	Georgia.....	44.09%
5	Texas.....	41.85%
6	Florida.....	35.10%
7	North Carolina..	30.64%
8	Utah.....	24.79%
9	Idaho.....	24.20%
10	Virginia.....	23.09%
11	Washington....	21.21%
12	California.....	19.20%
13	Tennessee.....	18.20%

Per Pupil Spending

34	Arkansas.....	9,616
35	California.....	9,595
36	Indiana.....	9,548
37	Kentucky.....	9,312
38	Georgia.....	9,202
39	Alabama.....	9,028
40	Colorado.....	8,985
41	South Dakota.....	8,881
42	Florida.....	8,755
43	Tennessee.....	8,630
44	Texas.....	8,593
45	North Carolina.....	8,512
46	Nevada.....	8,414
47	Mississippi.....	8,263
48	Oklahoma.....	7,829
49	Arizona.....	7,528
50	Idaho.....	6,621
51	Utah.....	6,500

*Census Bureau Data 2014

All but two of the fastest growing states in K-12 population (above 18% growth) appear in the bottom third of per-pupil expenditures.

Coming Full Circle

The first graphic in this paper depicted six of the top 10 states for percentage increases in K-12 general fund spending since 1992 appearing in the bottom third of per pupil spenders on K-12. Naturally, those six states represent some of the fastest growing states in the past 20 years. Arizona is actually “cheated” by the Census Bureau data, which doesn’t count most charter schools, meaning Arizona’s student growth and total spending growth is actually higher than reported.^v Roughly 133,000 Arizona public school students and the corresponding spending is not counted in their data.

The reverse is also highly correlative: states in the bottom of K-12 student growth find themselves near the top of per pupil spending.

Take the case of North Dakota, whose foray into oil drilling has increased the per capita income substantially. Their 1992 rank in per pupil general fund spending on K-12 was #39 overall. Since then, they increased their spending by 132%, which ranks #36 nationally. Their “weight of effort”- for state and local taxes for education per \$1,000 of personal income ranks them #48. Somehow they increased their per pupil spending ranking to #17. A 13.4% decrease in K-12 population since 1992 is the difference maker.

Per Pupil Spending

1	New York.....	20,610
2	District of Columbia	18,485
3	Alaska.....	18,416
4	New Jersey.....	17,907
5	Connecticut.....	17,745
6	Vermont.....	16,988
7	Wyoming.....	15,797
8	Massachusetts.....	15,087
9	Rhode Island.....	14,767
10	New Hampshire.....	14,335
11	Maryland.....	14,003
12	Pennsylvania.....	13,961
13	Delaware.....	13,938
14	Illinois.....	13,077
15	Maine.....	12,707
16	Hawaii.....	12,458
17	North Dakota.....	12,358
18	Nebraska.....	11,726
19	Minnesota.....	11,464
20	Ohio.....	11,354

Student Growth

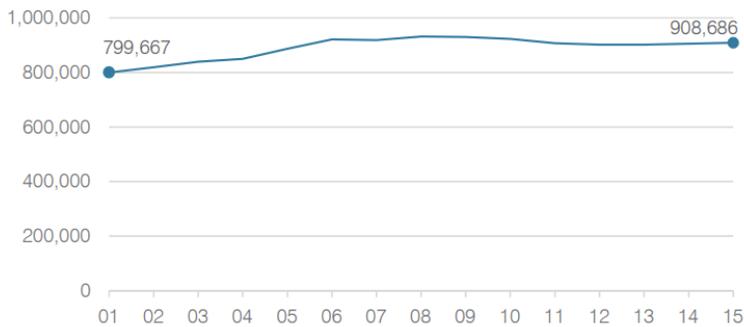
32	Indiana.....	3.76%
33	Hawaii.....	3.13%
34	Iowa.....	1.91%
35	Alabama.....	1.56%
36	Minnesota.....	0.70%
37	South Dakota.....	-0.92%
38	New York.....	-2.75%
39	Mississippi.....	-2.77%
40	Rhode Island.....	-5.19%
41	Pennsylvania.....	-6.31%
42	Montana.....	-7.58%
43	Wyoming.....	-9.39%
44	Vermont.....	-9.88%
45	Ohio.....	-11.18%
46	North Dakota.....	-13.41%
47	West Virginia.....	-13.73%
48	Louisiana.....	-16.70%
49	Michigan.....	-17.78%
50	Maine.....	-18.27%
51	District of Columbia	-44.75%

← 11 of the top 20
 Are in the bottom
 20 of student
 growth →

On Teacher Pay and the Student Diaspora

There are few who argue teachers are well compensated and policymakers of all stripes argue for increased teacher pay. It should be noted the Arizona K-12 formula does not dictate teacher pay; those remain local decisions, but it is valid to discuss the money available to pay teachers and the resulting teacher pay rankings. As is the case nationwide, teaching in Arizona has never been lucrative. To some extent, Arizona public schools followed nationwide trends and used incremental general fund dollars to expand student services such as teachers’ aides, medical staff and increased special education staff. However, Arizona did not aggressively engage in shrinking class sizes relative to such efforts in other states. To some degree, Arizona traded lower class sizes for higher wages.

Students attending

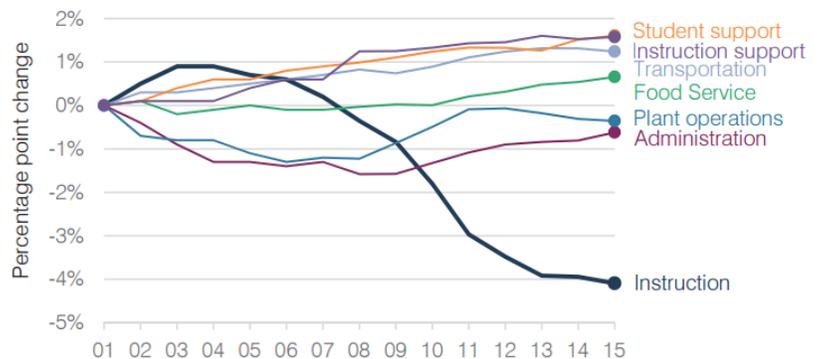


phenomena lasted until the mid-2000's before the current student diaspora took shape. As shown on the left, district public schools statewide have not grown since 2006 and many have seen enrollment decreases.

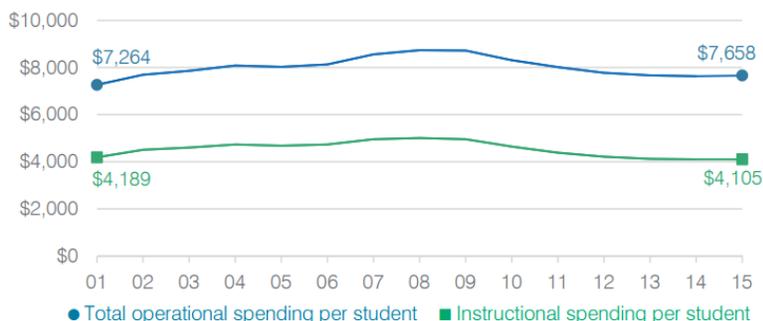
The diaspora of Arizona students has resulted in significant system inefficiencies which is the natural result of open enrollment and students matriculating charter schools. Massive growth in charter schools increased the total number of teachers 28% since 2005 against only 8.9% total K-12 enrollment growth.^{vi} Available classroom space abounds particularly in district schools with declining enrollments. Districts cannot quickly

reduce staff to balance their books. As districts lose students, their budgets contract in size, hurting their ability to raise wages even if their per pupil funding rises. For example, Mesa Unified could lose 10 students on average at each of their roughly 70 schools, resulting in a nearly \$5 million funding reduction without realizing reduced operating costs. The student diaspora plays a significant role in the oft-cited Auditor General (OAG) report which captures the decreases in spending on instruction.

Changes in operational spending percentages



Total operational and instructional spending per student (inflation adjusted to 2015 dollars)



Arizona's national rank for average teacher pay has decreased as Arizona decreased its students to teacher ratio from 22 to 18 (not to be confused with average class size).^{vii} The FY 2016 OAG report on classroom spending in K-12 schools noted that teacher pay has decreased over the last five years from roughly \$47,000 to \$46,000. The recession brought significantly

higher pension costs for districts with ASRS employer and employee rates rising to their current 22% of salary. School districts have also cited cost increases in health care premiums, student services and special education costs.

Using the OAG teacher pay average and accounting for per capita personal income, Arizona ranked #28 in indexed average teacher pay (125.7%) in 2014. Not high, but certainly not last. Teacher pay comparisons must account for the relative wealth between states and cost of living.

21	New Mexico	45,727	127.71%
22	Utah	45,695	127.32%
23	Idaho	44,465	126.53%
24	Wisconsin	53,679	126.38%
25	Hawaii	56,291	126.28%
26	Mississippi	42,187	126.13%
27	Vermont	55,958	125.91%
28	Arizona	46,026	125.67%
29	New Jersey	68,238	124.22%
30	Maine	49,232	123.50%
31	Tennessee	47,742	121.97%
32	Louisiana	49,067	120.80%
33	Maryland	64,546	120.29%
34	Iowa	52,032	118.22%
35	Missouri	46,750	117.28%
36	Connecticut	70,583	117.20%
37	North Carolina	44,990	116.74%
38	Florida	47,780	116.42%
39	Minnesota	54,752	115.57%
40	Texas	49,690	114.83%
41	New Hampshire	57,057	113.99%
42	Washington	52,969	112.57%
43	Kansas	48,221	111.16%
44	Nebraska	49,539	107.90%
45	Wyoming	56,583	107.84%
46	Oklahoma	44,549	107.61%
47	Colorado	49,615	107.13%

AZ #28 in indexed teacher pay

Of note, Arizona’s teacher pay index is comparable to neighbors Utah and New Mexico and is actually better than Colorado, Texas, and Wyoming. A measurable and legitimate policy goal would attempt to keep the state’s average teacher pay near the U.S. average teacher pay index, currently 133%. Even in environments where school districts witness increases to their operating budget, administrators struggle to increase teacher pay with competing demands from increased costs in other areas. Additionally, there is the competing desire to reduce student-teacher ratios.

Growth states like Arizona tend to have younger teachers predominantly on the low end of the pay scale. The charter school explosion has amplified this phenomena as Arizona saw significant growth in total campuses and teachers. Evidence of this massive growth in new schools is made clear in Arizona’s teacher experience rankings. According to the latest National Center for Education Statistics (NCES) report on the topic, Arizona leads the nation for percentage of teachers with fewer than three years’ experience and second in the nation for teacher with zero to nine years’ experience.^{viii} This combined with declining enrollment at many district public schools will continue to impact average teacher pay.

This is not to suggest open enrollment or school choice has been deleterious to Arizona’s K-12 system as there are obvious long term benefits associated with improving educational outcomes. However it is

important for policymakers to understand that a more dynamic, less centrally planned system has had profound impacts on a number of important financial realities including teacher pay.

What is the End Goal?

It is undeniable that state and federal spending on K-12 public schools nationwide has increased dramatically: \$333 billion per year or 159% since the CB began tracking in 1992 (on maintenance and operations, not including capital). The median state increase has been \$4 billion. Significant funding increases have largely been directed to increasing student services, reducing class sizes, and improving special education access. While many of these budgetary choices were made willfully by local education agencies, state and federal mandates played a role as well.

State policymakers have the tough task of prioritizing a variety of programs from child services, universities, social welfare programs, infrastructure, etc.; all of which decry a lack of funding. Much like other programs, it is the perceived role of education advocates to demand funding increases, to at least ensure additional available dollars are not invested elsewhere. The education community needs to identify specific costs for identifiable reforms as well as a steady trajectory for future funding expectations. Unfortunately, history has demonstrated that spending increases are described as inadequate in light of a nearly immovable statistic.

Some policymakers have called for an increase in K-12 spending that would put Arizona at the nationwide average for M&O per pupil spending. Such an endeavor would require a tax increase to the tune of \$3.8 billion annually- nearly the entire amount currently captured by the state personal income tax. Arizona could both raise personal income taxes by 50%, add a cent to the statewide sales tax and direct all new revenues to K-12 and it would still not crack the top 30 of per pupil spenders. Arizona will continue to increase its student population; making it all the more difficult to compare itself to states with declining or flat K-12 populations. The point is Arizona will remain at the low end of this particular measure for the foreseeable future regardless of incremental increases. Measuring by that yardstick alone is futile.

Governor Ducey charged a commission to spend a year studying the system to find a resolution to provide equitable, student-based funding with existing dollars. The ultimate solution should provide a stable trajectory which can provide predictability for taxpayers and education providers. Moreover, Arizona should avoid the temptation to adopt new inequitable funding strategies while it designs plans to shed old ones.

ⁱ NEA, 2016

ⁱⁱ Ibid

ⁱⁱⁱ Ranking compiled by NEA, 2016. Their data is from Census Bureau and Bureau of Economic Analysis

^{iv} Ibid

^v 2014 Census Bureau Education report notes only government sponsored charters are counted

^{vi} Ibid

^{vii} NEA *Rankings and Estimates* from 2016 and 2005

^{viii} NCES Table 209.30 FY 2012