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How much does Alaska spend on K-12 education?

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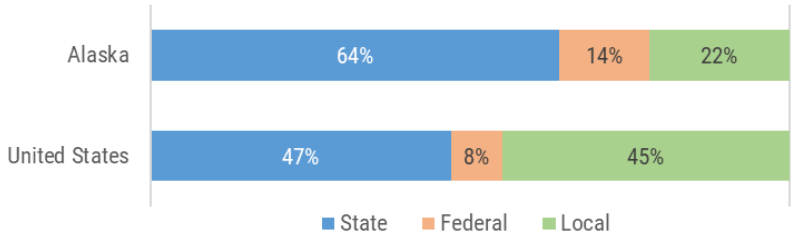
Education funding in Alaska, as in most states, is one of the largest allocations in the state operating budget. In 2017, Alaska's K-12 per-pupil spending was $17,838, which is 46% higher than the national average. However, a lot of things in Alaska are expensive relative to national averages: healthcare, food, and energy, to name just a few. In this paper we adjusted Alaska's data from the US Census Bureau 2017 Annual Survey of School System Finances to state and national cost indices, and find that Alaska's per-pupil expenditures are on par with national averages. As many drivers of Alaska's education costs extend beyond education policy, we caution against cuts that leave districts with few choices but to diminish the teacher workforce by eliminating positions or hiring lower quality teachers with less competitive salaries.

Where does Alaska's public education funding come from?

There are many ways to measure education spending. Because the focus of this paper is to compare Alaska with other states, we use data from the US Census Bureau *State and Local Government Finances.*[1]

In the 2017-2018 school year, there were just under 130,000 students in just over 500 public K-12 schools. In 2016, Alaska's state expenditure on education (K-12 and postsecondary) was $2,787,912, or 25.8% of the state general expenditure; this compares to national average of 24.9%. However, Alaska state and local's expenditure on K-12 education was $2,365,458, or 17.3% of the state general expenditure, which compares to a national average of 21.5%.[2]

Figure 1
Distribution of funding sources in per-pupil spending, 2017



The proportion of state and local dollars funding K-12 education in Alaska differs significantly from the national average. Source: US Census 2017 Public Elementary-Secondary Education Finance Data

Sixty-four percent of Alaska's per-pupil spending comes from state general funds; Alaska's proportion of state funding is the fifth-highest in the nation, and its proportion of local funding contributions is fifth-lowest. Figure 1 compares Alaska's funding distribution to the national average.

Part of the reason for the relatively low percentage of local contributions is that local taxes can only be collected in organized boroughs, and 19 of Alaska's 54 school districts are Regional Education Attendance Areas (REAAs), meaning the local government is not organized to collect school taxes (Berman, Hull, & McDiarmid, 2001). While the proportion of local contributions is among the lowest in the nation, the proportion of federal funding, at 14%, is the 6th highest.[3]

[1]US Census Bureau, *State and Local Government Finances, 2016:* https://www.census.gov/data/datasets/2016/econ/local/public-use-datasets.html

[2]Numbers in this document are different from the tables published by the Alaska Legislative Finance Division, which are more familiar to Alaskans. Using the US Census Bureau data allows us to make comparisons across states even though state and local governments across the US distribute the costs of public services in different ways; in other words, one state might pay for things local governments pay for elsewhere. A previous ISER research summary explains the major differences in sources for Alaska's state spending: https://iseralaska.org/publications/?id=1665

[3]Alaska has the highest proportion of Indigenous students in the nation (22%), but the federal Bureau of Indian Education (BIE) does not operate any schools in Alaska, nor are there any tribally operated public schools, per the provisions of the Alaska Native Claims Settlement Act (ANCSA, 1971). Instead, Alaska receives support under federal funding programs including Title VI Indian Education from the US Department of education and Johnson O'Malley funding for education from the Bureau of Indian Affairs.

What does Alaska spend on public education, and how does that compare to other states?

In 2017, Alaska's average per-pupil spending was $17,838 (US Census Bureau, 2017). Unadjusted, Alaska ranks 6th in the nation with 46% higher per-pupil spending than the national average of $12,201.[4] Average spending, while a useful comparator, presents challenges in its raw form, because costs differ from place to place. This means we need to apply some adjustments if we want to discuss education spending in comparison to other states.

Spending adjustments applied

Within Alaska, costs differ significantly between communities, so the first step of our analysis adjusts Alaska's education spending to account for the higher costs (relative to Anchorage) that districts face. To do this, we used the Foundation Formula's school size adjustment (see Box 1) and district cost factor (see Box 2). We calculated an average district cost factor, weighted by the school-size adjusted enrollment. Then we used that average cost factor to calculate an Anchorage-adjusted average per-pupil spending of $14,853. This figure is $2,652 (22%) more per-pupil than the national average, and would rank 14th highest nationally.

ACCRA Cost of Living Index applied

Even after adjusting Alaska communities to Anchorage, we still cannot directly compare to the nationwide average because Anchorage's cost of living is higher than most other communities in the US. We applied the most widely used cost of living index (COLI)[5], published by the American Council for Community and Economic Research (ACCRA) to our statewide calculations. Adjusted nationally, Alaska's per-pupil spending is $11,997, or $204 (2%) below the national average.[6] Table 1 presents these calculations, and figure 2 (see next page) depicts them graphically.

Box 1.

How does Alaska set its K-12 education budget?

The total amount Alaska spends on K-12 education and the distribution of those funds amongst districts is determined by a complex set of adjustments called the *School Foundation Formula*. The *School Foundation Formula* allocates state operating support according to the product of the *Base Student Allocation* (BSA), the per-pupil funding level set annually by the legislature, and an adjusted average daily membership (ADM) which makes adjustments for 3 categories of differences amongst schools:

school size - because smaller schools are more costly to operate at the per-pupil level

district cost factor - because some Alaska communities have higher costs of living and operations than others

special programs like special education, vocational education, and correspondence programs – because the costs of these programs are distinct from typical instructional activities, and have different operating costs

Table 1
Alaska's 2016-17 per-pupil spending, adjusted to state and national indices

Per-pupil spending	Dollars	Difference from national average	
		$	%
Alaska's average per-pupil spending	17,838	+5,637	+46
Adjusted to Anchorage	14,853	+2,652	+22
National average	12,201	.	.
Adjusted to national average	11,997	-204	-2

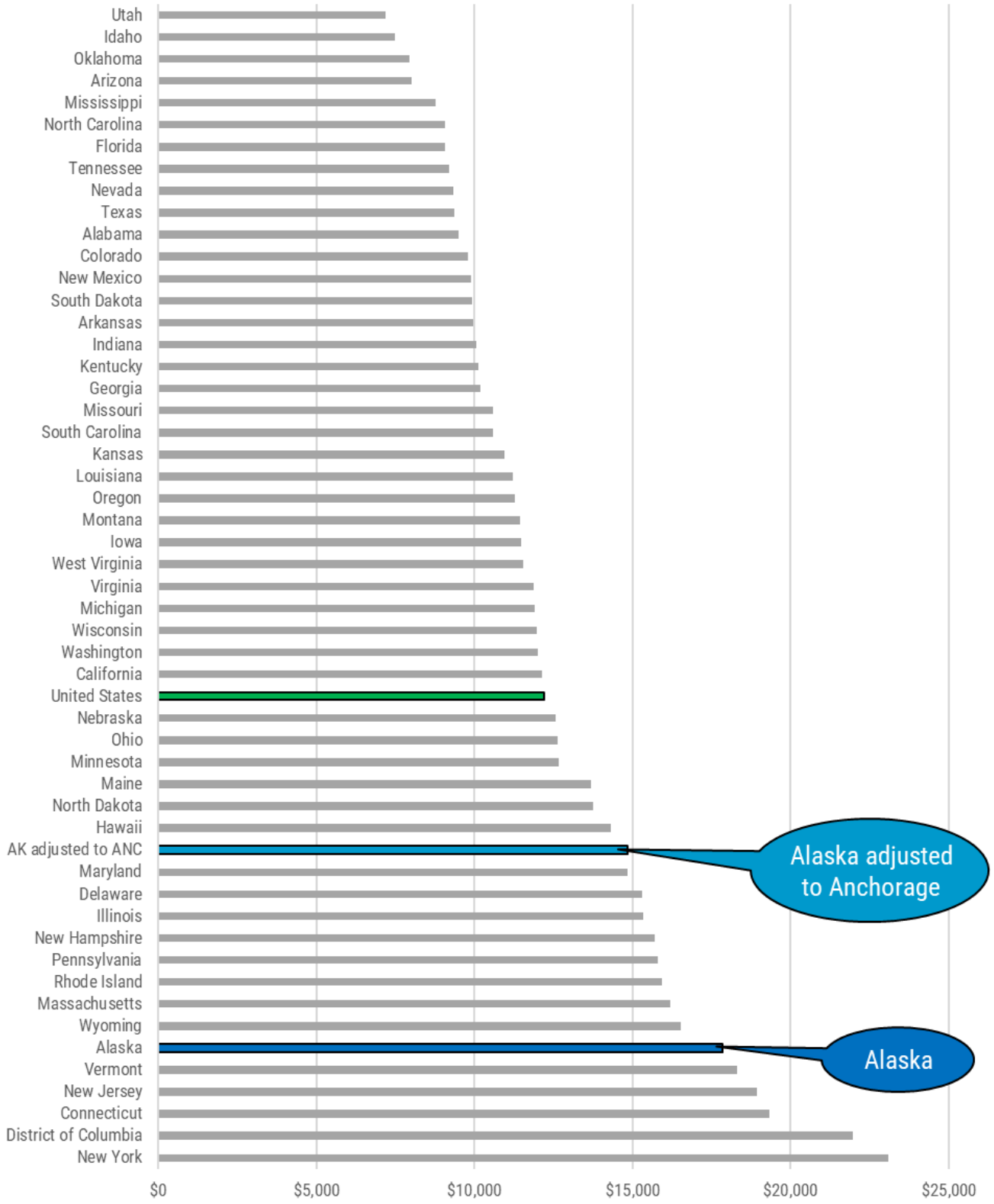
After adjustments, Alaska's per-pupil education spending is slightly lower than the national average.

[4]It is important to note that since national numbers were last updated, the strong economy in the lower 48 has allowed other states to invest more dollars in education, while Alaska's fiscal crisis has constrained its ability to do the same. Alaska relative spending has almost certainly decreased since national numbers were last reported.

[5]The American Council for Community and Economic Research (ACCRA) cost of living index (COLI) places Anchorage at 128.4 percent of the national average: https://www.infoplease.com/business-finance/us-economy-and-federal-budget/cost-living-index-selected-us-cities1

[6]When applying this adjustment, we can no longer use rank order, because other places in the US also have higher costs of living, and their own adjustments would need to be applied.

Figure 3
Average 2017 per-pupil education spending



Adjusting for within-state and national differences dramatically changes Alaska's rank order and relative spending to other states. Source: U.S. Census Bureau 2017 Annual Survey of School System Finances

What drives the cost of public education in Alaska?

Though Alaska's per-pupil education cost is just about average after adjustments, it is still valuable to look at how our state spends education dollars. Three Alaska exceptionalities set us apart from other states in our education spending patterns: small schools, healthcare, and energy.

Small schools

Alaska has a lot of small schools - of the 443 "regular"[7] schools, 58 (13%) have fewer than 25 students, and an additional 34 (8%) enroll between 26 and 50 students (Pierson & Stevens, 2017). It is Alaska's legal and ethical responsibility to provide free and appropriate public education (FAPE) to all students. Three major cases define the state's responsibility: a settlement reached for *Hootch v. Alaska* (1975) affirmed the allegation that boarding schools were inadequate proxies for local public schools, and the state agreed to construct high schools in rural Alaskan communities with eight or more high-school aged students;[8] within six years, there were new or expanded high school programs in more than 100 villages (Cotton, 1984). In 1999, *Kasayulie v. State* found that inattention to rural costs in financing school construction discriminated against rural and Alaska Native students, violating the Civil Rights Act and the equal protection and education clauses of the State constitution; the ruling prompted revisions of the school construction funding formula. Most recently, *Moore v. State of Alaska* (2004) ruled that the state was providing adequate funding but insufficient assistance and oversight to school districts in which schools were failing; settlements that followed included funding to equitize resources through fiscal supports (Education Law Center, 2019).

Presently, Alaska funds schools in any community with at least ten students, and over a dozen schools in small remote communities have closed in the past decade (Hanlon, 2017).[9] Small schools are more costly to operate – they have small class sizes, and do not benefit from economies of scale in capital and labor costs. Additionally, these schools experience high turnover of teachers and principals (Hill & Hirshberg, 2013; Pierson & Stevens, 2017), which is costly both in dollars (DeFeo, Tran, Hirshberg, Cope, & Cravez, 2017) and in diminished student achievement (Ronfeldt, Loeb, & Wyckoff, 2013).

Healthcare

Alaska has the highest per capita healthcare costs in the US (Passini, Frazier, & Guettabi, 2018), which negatively affects private and public sectors of our economy. Healthcare costs are a part of teacher compensation. Alaska unadjusted per-pupil spending on teacher salaries is 14th in the nation - but after adjusted to US cost-of-living, the amount is 23% below the national average. Similarly, Alaska's unadjusted per-pupil spending on educator's employee benefits is 64% above the US average - but after adjusted is only 9% above the US average. While the challenge of high healthcare costs is not unique to education, in a fixed budget scenario these costs put downward pressure on wages, making it more difficult for Alaska districts to offer teachers a nationally competitive salary.

Energy

Energy costs include heat and electricity, and school districts need both. Fuel costs more in remote places because it costs more to transport and store it there, small communities often do not benefit from economies of scale in making fuel purchases, and districts may not have specialized procurement personnel able to get the best price. Electricity costs can be three to five times higher in remote places (Alaska Energy Authority, 2017), and schools do not benefit from the Power Cost Equalization (PCE) programs that reduce these costs for local residents. Regardless of these higher costs, school districts need energy – they require more fuel to heat buildings in colder communities, and electricity to operate them. Regardless of the number of students in a given building, it must be heated and lit, and the costs of doing so in Alaska are unique to our state.

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[7]This classification from Regional Education Labs Northwest (REL-Northwest) includes neighborhood public schools, and excludes alternative, correspondence, and Division of Juvenile Justice schools, as well as schools with missing enrollment.

[8]This was changed to 10 in 1998.

[9]Students in communities with too few students to support a school can opt for home schooling, participate in a correspondence school program, or attend one of three secondary public boarding schools in the state.

What are the implications for education spending in Alaska?

Operating costs including fuel and electricity, healthcare costs, and community cost differentials that are high in Alaska in general and particularly high in remote and rural places significantly *affect* schools, but are not tied to education policy. Understanding that Alaska's adjusted spending is on par with national averages, this unfortunately leaves instructional expenditures as one of the few places where districts have budget flexibility. With the objective of providing high quality education to all of Alaska's children, we frame our implications around two key current fiscal issues in Alaska: the state's teacher shortage and budget cuts to K-12 education.

Alaska's teacher shortage

The majority of Alaska's K-12 spending is in instructional expenditures, and teacher compensation makes up the largest proportion of these costs. While other states are increasing salaries in a competitive market characterized by significant teacher shortages that have reached "crisis" levels (Gunn, 2018; Picchi, 2018), previous ISER research in 2013 estimated that Alaska teacher salaries were lower than they should be (Hirshberg et al., 2015). If Alaska teacher salaries do not keep up with national trends, the state's existing retention and turnover challenges will be exacerbated, especially in remote and high-poverty schools that have the greatest difficulty recruiting and retaining teachers (DeFeo, Hirshberg, & Hill, 2018; DeFeo & Tran, 2019).

Budget cuts to K-12 education

Districts have limited flexibility in their budgets, and it is difficult for them to quickly absorb cuts without increasing class sizes and laying off teachers. Education finance decisions, thus, must consider the intersection between fixed and flexible costs in district budgets, noting that while the most flexibility lies in instructional expenditures, these are simultaneously the most critical component to achieving education outcomes.

Box 2.

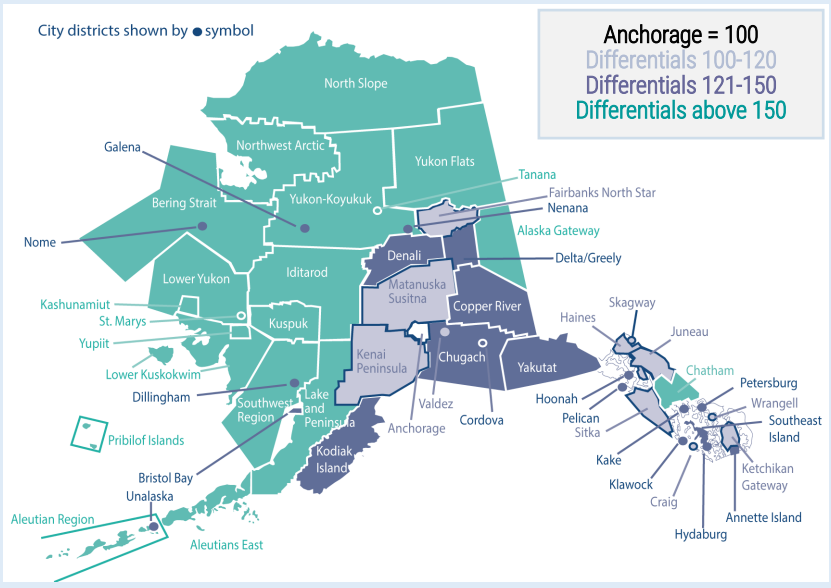
How are district cost factors determined?

The district cost factor, also referred to as the geographic cost differential, indicates how much more it costs to provide the same educational services in Alaska's communities as compared to Anchorage. Factors influencing the cost differential include the higher costs of attracting quality teachers and administrators to rural areas, transportation costs for personnel and supplies, and energy costs.

Relative to Anchorage, 31 Alaska districts have cost differentials between 1.07 and 1.49, meaning that it costs 107% to 149% more to operate schools in those communities. Twenty-one districts have cost differentials of 1.5 or greater, meaning that it costs at least one-and-a-half times as much to operate schools in those places (see Figure 3).

Alaska's district cost factor differentials were last updated in 2005 (see Tuck, Berman, & Hill, 2005), and some Alaska communities have notably changed since then. In 2015, ISER updated community cost differentials for instructional salaries (see Hirshberg, Berman, DeFeo, & Hill, 2015), but these calculations have not been applied to the *School Foundation Formula*.

Figure 3
Current Alaska district cost differentials relative to Anchorage, last calculated in 2005



Even within a single district, costs of operating schools in rural villages and rural hubs differs significantly. These district cost differentials are a weighted average of the lower costs in hubs and higher costs in villages.

Conclusion

Our analysis finds that, after adjustments, Alaska's per-pupil education spending is on par with the national average, but Alaska still has some unique expenses including small schools, healthcare, and energy costs, and these factors are largely outside the school districts' control. Alaska will not meet its education objectives through increased spending alone – dollars must be spent well in order to produce desired outcomes. In the same vein, reducing spending without a critical examination of *how* dollars are spent will likely harm student learning and achievement. As districts seek to absorb budget cuts, we encourage attention and priority to maintaining instructional expenditures that benefit students.

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