School Funding Equity in Puerto Rico

A risk and resource brief on Puerto Rico Department of Education public schools

Bruce D. Baker · University of Miami · November 2026

Summary

This brief applies the first step of the framework for evaluating and reforming education finance systems (Baker, Atchison & Levin, 2026) to Puerto Rico, following analyses of Mexico, Brazil, France, the Republic of Korea, Australia and England. **Risk analysis** asks which student characteristics predict lower outcomes. **Resource analysis** asks whether resources are greater where those risks are concentrated, after accounting for cost factors that are not need. Puerto Rico is a single statewide school district: the Puerto Rico Department of Education (PRDE) runs every public school through seven regional offices. Differences between schools therefore reflect the department's own allocation decisions, not local wealth. The analysis covers 854 schools enrolling 235,819 students in 2024-25, with school-level spending data for 2019-20 to 2024-25 and META-PR test results for 2021-22 to 2025-26.

- **Economic disadvantage drives risk in secondary schools, but primary results barely track any need measure.** Among secondary schools, the share of tested students who are economically disadvantaged alone explains 43% of the variation in proficiency, and schools at the 90th percentile of need score 1.6 standard deviations below those at the 10th. Among primary schools no measure explains more than 4%, which raises questions about primary test results as an outcome measure.
- **School funding is essentially flat with respect to need.** Comparing schools of similar size and rurality in the same municipio, total spending per pupil at the 90th percentile of need is 1.02 times that at the 10th. It is 1.05 in primary and 0.99 in secondary schools. England's comparable ratio is about 1.2.
- **The small differences that exist favour primary schools and school-site staff.** High-need primary schools have 11% more school-site spending and 9% more teachers per pupil. In secondary schools, Commonwealth (state) funding is slightly regressive (0.97).
- **Federal relief doubled spending without targeting need.** Total spending per pupil rose from $7,233 in 2019-20 to $15,317 in 2024-25, mostly from federal funds. Federal program spending was distributed almost evenly across schools (1.01), and the overall ratio was no higher in 2024-25 (1.00) than in 2019-20 (1.02).
- **Raw spending differences mostly reflect school size.** High-need schools are smaller on average, so they spend somewhat more per pupil before size is controlled. That premium largely disappears once size is held constant.
- **Cost modeling is possible but harder than in England.** School-level spending is unusually complete for a single-district system. But outcome data are thin and in places doubtful, need measures sit near their ceiling, and teacher pay follows a single island-wide scale.

1. Framing

The framework starts from the purpose of a school finance system: to deliver the resources schools need to give every child an equal opportunity to achieve common, adequate outcome goals (Baker, Atchison & Levin, 2026). Equal opportunity requires differentiating resources by the obstacles students face. The evidence for those obstacles is the relationship between student characteristics

and outcomes. Step 1a, risk analysis, estimates that relationship (Outcomes = f(Needs, Context)). Step 1b, resource analysis, tests whether resources rise with need after accounting for cost factors that are not need, such as school size and rurality (Resources = f(Needs, Context)).

The Constitution of Puerto Rico (1952), Article II, Section 5, guarantees every person a right to an education directed to the full development of the personality. It requires a free and wholly non-sectarian public system, and bars public funds for schools other than the state's. Congress struck Section 20, which listed a right to free elementary and secondary education among other social rights, as a condition of approving the constitution (Public Law 82-447). No court has heard an adequacy or equity claim. In 2018 the Supreme Court of Puerto Rico upheld the closure of schools in Arecibo and Morovis, holding that the closures did not directly and substantially interfere with the right to education. The Appendix sets out the constitutional text, its drafting history, the case law and the federal fiscal overlay in full.

Ley 85-2018 (the Education Reform Law) directs the Secretary to allocate budgets to regions by equity standards per student and per school. It requires that at least 70% of the department's budget go to direct services in schools. Since 2016, PRDE budgets have been subject to certification by the Financial Oversight and Management Board under PROMESA. Federal programs, chiefly Title I and pandemic relief funds, now pay for a large share of school spending.

Table 1. Data sources

Domain	Source	Level / years	Use
Spending	PRDE Perfil Escolar: spending per pupil by school, by spending level (school, regional, central) and funding source (federal, Commonwealth, Title I schoolwide)	School; 2019-20 to 2024-25	Resources
Enrolment	PRDE official M1 count	School; 2019-20 to 2024-25	Per-pupil denominators, weights
Outcomes and need	META-PR results by school, subject and subgroup (economically disadvantaged, disabilities, Spanish learners, homeless)	School; 2018-19, 2021-22 to 2025-26	Risk analysis; need index
Staffing, register	NCES Common Core of Data: teachers FTE, free or reduced-price lunch, locale, grades	School; 2018-19 to 2024-25	Teachers per pupil; FRL; school level
Context	ACS 2019-2023 child poverty (B17020) by tract and municipio; TIGER/Line tracts	Tract, municipio	Risk candidates

Note: All data are openly published. PRDE data were retrieved from the Perfil Escolar public reports in November 2026. Schools with fewer than 30 students, special-education schools, institutes, CASA (alternative) and summer programs are excluded from the resource analysis.

2. Risk: which needs predict lower outcomes?

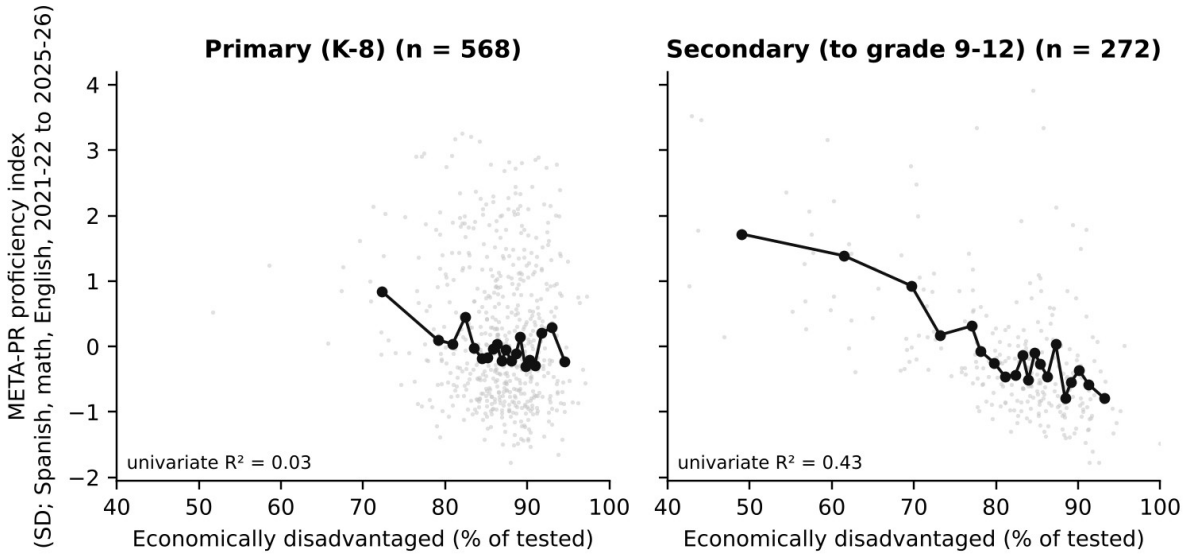
The outcome is a proficiency index. For each year it averages the standardized percentages of students proficient in Spanish, mathematics and English on META-PR, Puerto Rico's state assessment. The index is restandardized within year and phase and averaged over 2021-22 to 2025-26 (568 primary and 272 secondary schools with at least ten students tested). Primary schools are those whose highest grade is 8 or below.

Table 2. Share of variation in school proficiency explained by each candidate need measure (R^2)

Measure	Primary	Secondary
Economically disadvantaged (% of tested)	0.03	0.43
Students with disabilities (% of tested)	0.01	0.13
Hispanic, not Puerto Rican (% of tested)	0.01	0.04
Spanish learners (% of tested)	0.00	0.01
Child poverty, census tract of school	0.00	0.00
Child poverty, municipio	0.01	0.00
Free or reduced-price lunch (% of enrolment)	0.04	0.00
Homeless (% of tested)	0.00	0.00

Note: Weighted by students tested. Forward selection on cross-validated R^2 (folds by municipio, sign-constrained) selects economically disadvantaged % and FRL % for secondary schools (cross-validated R^2 0.42) and FRL % and disabilities % for primary schools (0.03).

Figure 1. School proficiency and the share of tested students who are economically disadvantaged, 2021-22 to 2025-26



Note: Each grey dot is a school; black points are means of twenty equal-sized groups of schools, weighted by students tested.

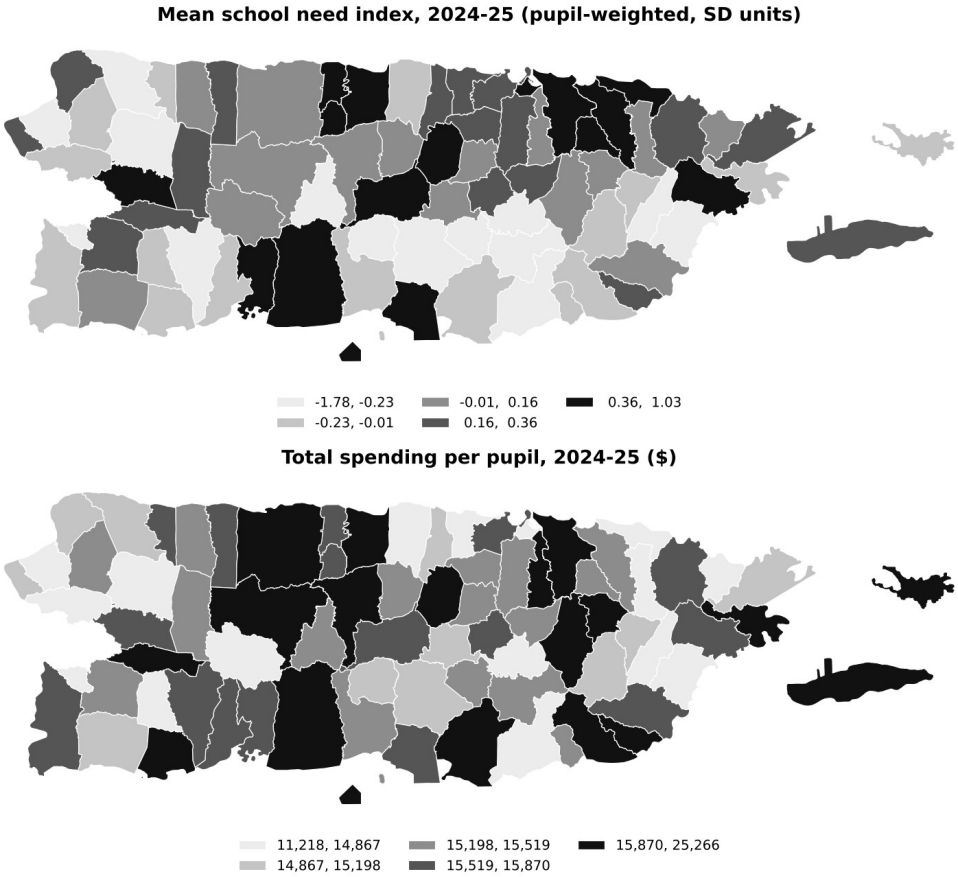
In secondary schools, poverty is the dominant risk. In 2024-25, secondary schools in the lowest-need tenth, where 58% of tested students were economically disadvantaged, had 73% proficient in Spanish, 57% in mathematics and 67% in English. In the highest-need tenth (92% disadvantaged) the rates were 35%, 25% and 24%. The share of students with disabilities adds little once poverty is known. Child poverty measured around the school, by census tract or municipio, explains almost nothing: in a system where 85% of tested students are economically disadvantaged, the students enrolled matter more than the neighbourhood.

Primary school results are different. No candidate measure explains more than 5% of the variation, and the economically disadvantaged share explains 3%. The flat relationship has three possible explanations, none ruled out here. Primary schools may be more homogeneous: the middle 80% of primary schools range only from about 80% to 91% disadvantaged. Some school results may be inflated or unreliable. Or primary outcomes may depend on factors the data do not capture. That is unusual: in England, for example, poverty and special educational needs are strong predictors of

primary results. Puerto Rico's primary META-PR results deserve an audit before they are used for accountability or cost modeling.

The need index used in the resource analysis is the predicted outcome shortfall from the secondary model, applied to every school's own student characteristics and standardized across 2024-25 students. A single scale lets primary and secondary schools be compared. The phase-specific models give a second index used as a robustness check, with similar results. Across all schools, the 10th and 90th percentiles of need are -1.15 and 0.87 standard deviations.

Figure 2. Mean school need and total spending per pupil by municipio, 2024-25



Note: Student-weighted means of schools in each municipio, in quintiles. Mona Island is omitted.

3. Resources: does funding follow need?

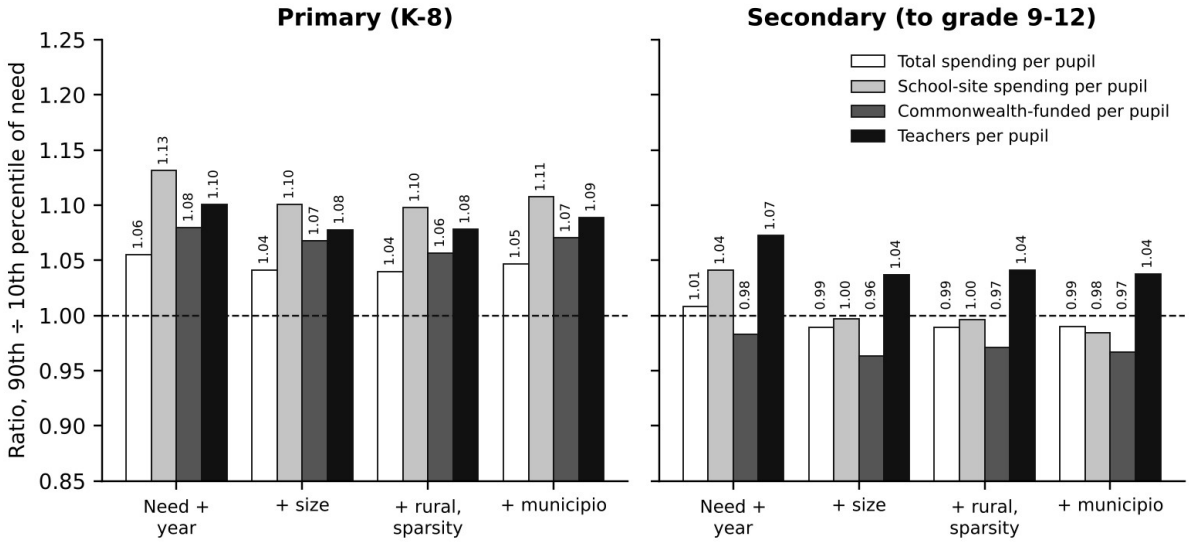
Each resource measure (in logs) is regressed on the need index, with student weights, year effects and indicators for Alianza (charter), specialized and vocational schools. Standard errors are clustered by municipio. There are four nested specifications: need and year only (S1); adding a quadratic in log enrolment (S2); adding PRDE's rural designation and sparsity, measured as distance to the third-nearest school of the same phase (S3); and adding municipio fixed effects (S4). S4 compares schools in the same municipio. The summary is the ratio of predicted resources at the 90th and 10th percentiles of need.

Table 3. Ratio of predicted resources at the 90th and 10th percentiles of need

Resource	S1	S2	S3	S4
All schools				
Total spending per pupil (school + regional + central)	1.03	1.01	1.01	1.02
School-site spending per pupil	1.08	1.05	1.04	1.05
Federal program funds per pupil	1.01	1.01	1.01	1.01
Commonwealth (state) funds per pupil	1.03	1.01	1.01	1.01
Title I schoolwide funds per pupil	1.07	1.03	1.03	1.04
Personnel spending per pupil	1.04	1.02	1.01	1.02
Non-personnel spending per pupil	1.01	1.01	1.01	1.01
Teachers per pupil	1.07	1.04	1.04	1.04
Primary				
Total spending per pupil (school + regional + central)	1.06	1.04	1.04	1.05
School-site spending per pupil	1.13	1.10	1.10	1.11
Federal program funds per pupil	1.02	1.02	1.02	1.01
Commonwealth (state) funds per pupil	1.08	1.07	1.06	1.07
Title I schoolwide funds per pupil	1.06	1.03	1.04	1.06
Personnel spending per pupil	1.08	1.05	1.05	1.07
Non-personnel spending per pupil	1.03	1.02	1.02	1.01
Teachers per pupil	1.10	1.08	1.08	1.09
Secondary				
Total spending per pupil (school + regional + central)	1.01	0.99	0.99	0.99
School-site spending per pupil	1.04	1.00	1.00	0.98
Federal program funds per pupil	1.00	0.99	0.99	0.99
Commonwealth (state) funds per pupil	0.98	0.96	0.97	0.97
Title I schoolwide funds per pupil	1.09	1.05	1.04	1.05
Personnel spending per pupil	1.02	0.99	0.99	0.99
Non-personnel spending per pupil	0.99	0.99	0.99	0.99
Teachers per pupil	1.07	1.04	1.04	1.04

Note: 860 schools (579 primary, 281 secondary), 2019-20 to 2024-25; teachers from CCD. Percentiles of need computed across students in 2024-25. "All schools" models add a secondary indicator. Federal, Commonwealth and Title I schoolwide funds sum to total spending.

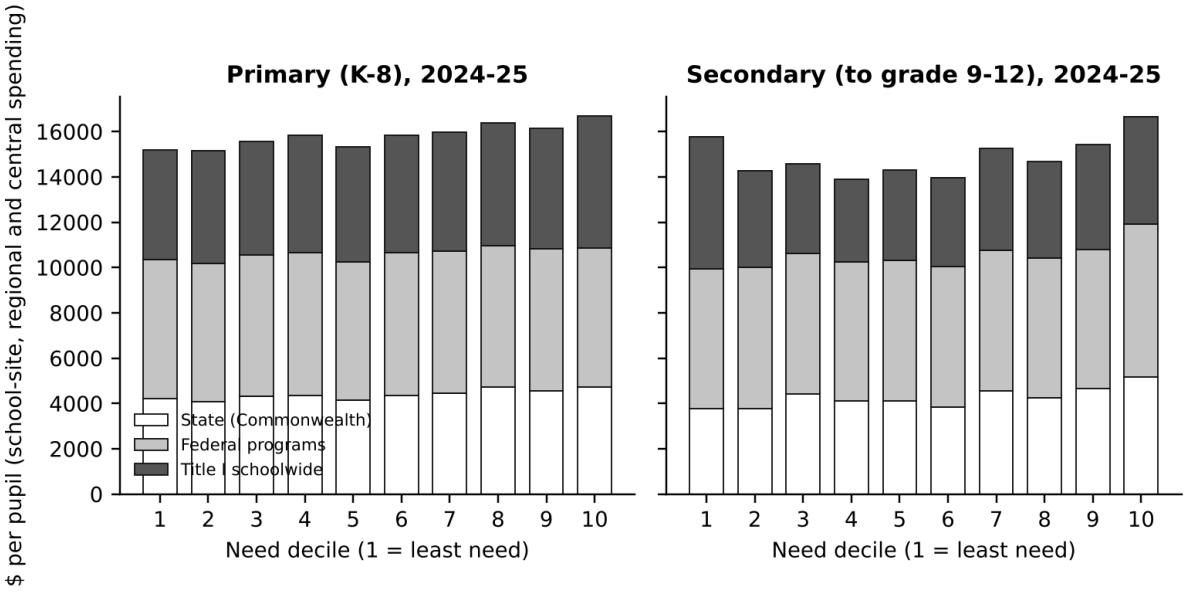
Figure 3. Resources at high relative to low need, by phase and specification



Resources barely rise with need. In S4, total spending per pupil at the 90th percentile of need is 2% higher than at the 10th, and school-site spending 5% higher. In primary schools the differences are larger: 5% in total spending, 11% in school-site spending and 9% in teachers. In secondary schools, total and school-site spending are slightly lower in high-need schools, and only teachers (1.04) and Title I schoolwide funds (1.05) rise with need.

Controlling for size matters. Without controls (S1), the ratios are higher, because high-need schools are smaller on average: the highest-need tenth averages 273 students against 411 in the lowest. Small schools spend more per pupil whatever their students' needs. In 2024-25, total spending per pupil rose from $14,942 in the lowest-need tenth to $16,577 in the highest. Much of that gap reflects scale rather than deliberate targeting.

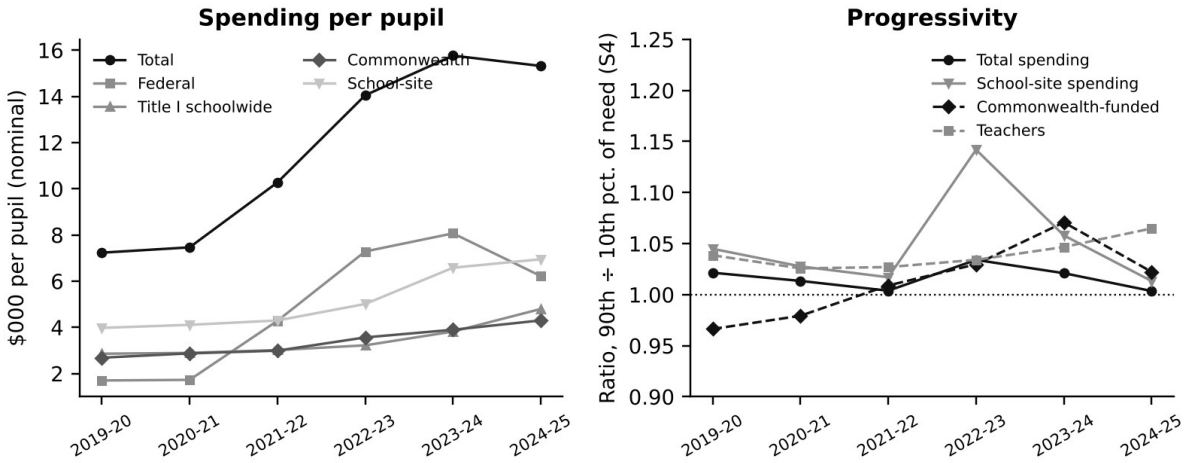
Figure 4. Spending per pupil by need decile and funding source, 2024-25



Note: Student-weighted means. Total spending includes regional and central spending allocated to schools by PRDE.

Funding sources differ. Federal program funds, the largest source in 2024-25 ($6,219 per pupil), are spread almost evenly (1.01). Title I schoolwide funds ($4,797) are mildly progressive (1.04). Commonwealth funds ($4,301) are progressive in primary schools (1.07) and regressive in secondary schools (0.97). The share of total spending spent at the school site rises from 44% in the lowest-need tenth to 50% in the highest, while the share of allocated central spending falls. Central spending is allocated by PRDE's own method, so school-site spending is the cleaner measure of resources a school controls.

Figure 5. Spending per pupil and progressivity by year, all schools



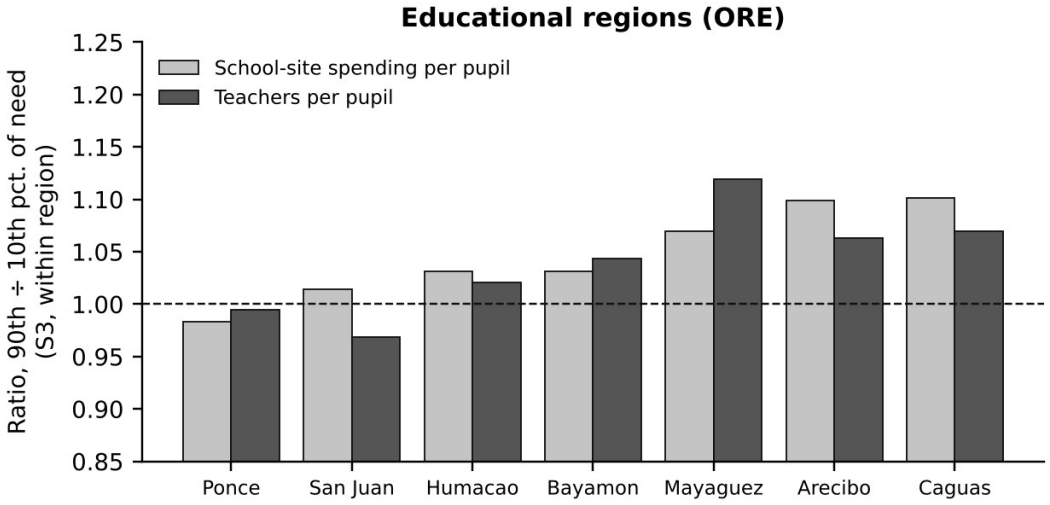
Note: Left, student-weighted mean spending per pupil, nominal dollars. Right, ratio of predicted resources at the 90th and 10th percentiles of need, S4.

Total spending per pupil more than doubled over six years, from $7,233 in 2019-20 to a peak of $15,764 in 2023-24, as federal pandemic relief arrived. Federal program funds rose from $1,700 to $8,069 per pupil, while enrolment fell from 292,518 to 235,819. Progressivity did not change: the S4 ratio for total spending was 1.02 in 2019-20 and 1.00 in 2024-25. Commonwealth funds moved from slightly regressive (0.97) to slightly progressive (1.02).

4. Regions and school types

Within the seven educational regions, holding size, rurality and sparsity constant, the school-site spending ratio ranges from 0.98 (Ponce) to 1.10 (Caguas). Total spending per pupil differs little between regions ($14,960 to $15,504 in 2024-25), as expected in a single centrally funded system. In Ponce and San Juan, high-need schools receive no more teachers and little or no more school-site spending.

Figure 6. Progressivity of school-site spending and teachers by educational region (S3)



Holding need, size, location and municipio constant, vocational schools spend 2.5% less per pupil than regular schools and specialized schools 1.3% less. The 14 Alianza (charter) schools created under Ley 85-2018 report 22% lower total spending per pupil. Some operator spending may sit outside PRDE's accounts, so that difference should not be read as a measure of Alianza funding.

5. Potential for cost modeling (Step 2)

Step 2 of the framework estimates what it would cost for schools serving different students, at different scales, to reach a common outcome goal. The preferred approach is an education cost function: a model of spending as a function of outcomes, student need, input prices and structural cost factors, with controls for inefficiency and with outcomes treated as endogenous. A cost function needs, at the level where resources are deployed: (1) valid outcome measures across years, (2) comparable spending, (3) need measures, (4) input price measures, (5) structural cost factors, (6) enough variation in spending among schools with similar needs, and (7) plausibly exogenous sources of that variation.

Table 4. Data requirements for an education cost function, Puerto Rico

Requirement	What is available openly	Assessment
Outcomes	META-PR proficiency rates by school and subgroup, 2018-19 and 2021-22 to 2025-26 (2023-24 covers 693 schools). No scale scores or growth published	Weak to moderate. Primary results barely track need and should be audited; proficiency rates, not scores
Spending	PRDE spending per pupil by school, spending level and funding source, about 850 schools, 2019-20 to 2024-25	Strong, with one caveat: central and regional spending are allocated by PRDE's method
Need	Tested-student shares economically disadvantaged, with disabilities, Spanish learners, homeless; FRL; tract child poverty	Moderate. FRL is near its ceiling (about 91%); the disadvantaged share is the usable measure
Input prices	Single island-wide teacher salary scale; no school-level pay published	Little variation to model; a comparable-wage index by municipio would be needed if labour markets differ
Structural costs	Enrolment, grades, PRDE rural zone, distance to nearest schools, island municipios (Vieques, Culebra)	Strong
Spending variation	With need, size, rurality, sparsity and municipio held constant, residual variation in school-site spending per pupil is about 20% (1 SD); total spending about 8%	Sufficient
Instruments	The 2018 consolidation (about 255 closures), federal relief allocation rules, Ley 85-2018 per-student budgeting, hurricane (2017) and earthquake (2020) damage	Promising but untested

Puerto Rico's school-level spending data are more complete than those of most systems in this series, because PRDE publishes audited spending for every school. The binding constraint is outcomes. A cost function needs an outcome that reliably measures what schools produce, and the weak relationship between primary results and student need suggests META-PR primary results may not. A secondary-school cost function is feasible now. A full-system model would require scale scores or growth measures, and an audit of primary results.

6. Implications

- **Puerto Rico's system does not differentiate by need.** Per-pupil resources are almost the same in high- and low-need schools once size is held constant. Against a secondary outcome gap of 1.6 standard deviations, that falls well short of equal opportunity. England's system, by comparison, directs about 20% more to high-need schools.

- **Ley 85-2018's per-student budgeting should carry explicit need weights.** The law requires equity standards per student and per school, but the resulting allocation is close to flat. Weights for economic disadvantage, set by cost modeling, would give the standard content.
- **Federal funds should not stand in for a progressive Commonwealth formula.** Federal relief more than doubled spending but was spread evenly. As relief ends, Commonwealth funds, which are regressive in secondary schools, will again determine the distribution.
- **Audit primary outcomes before relying on them.** Accountability ratings, school closure decisions and any future cost model depend on META-PR results, and the primary results do not behave as outcome measures elsewhere do.
- **Fiscal oversight constrains any remedy.** PRDE's budget is certified by the Financial Oversight and Management Board. A need-based formula would have to fit within certified fiscal plans, or be built into them.

Limitations

- PRDE allocates central and regional spending to schools; the method is not published in detail. School-site spending is less affected but excludes some services schools receive.
- Need is measured among tested students, which excludes untested grades and students taking alternate assessments. The resource analysis assigns each school a single need value averaged over 2021-22 to 2025-26.
- Special-education schools, institutes and alternative programs, which serve many of the highest-need students, are excluded. Alianza spending may be incomplete.
- Teacher counts come from CCD, which reports fall FTE; spending data are fiscal years.

References

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Appendix: Constitutional and legal framework

Puerto Rico's education clause is an individual right that courts will hear, but they have not enforced it on adequacy or equity. Coded on the framework used in the author's survey of the 50 states and 162 countries, Puerto Rico is "right recognized, not enforced," with three flags: a no-aid clause enforced in 1994 and set aside in 2018, a supervised special-education remedy since 2002, and a federal fiscal constraint (PROMESA) that no state faces.

Table 5. Coded constitutional record, Puerto Rico

Field	Coding
Provision	Const. P.R. art. II, §5 (Bill of Rights), including a no-aid ("sostenimiento") clause
Adoption	Referendum Mar. 3, 1952; approved with conditions by Pub. L. 82-447, July 3, 1952; in force July 25, 1952; §5 private-school proviso added Nov. 4, 1952
Key phrase	"Toda persona tiene derecho a una educación que propenda al pleno desarrollo de su personalidad"; a system "libre y enteramente no sectario"
Language category (U.S.)	Free/general system clause with an individual-right preamble no state has
Rights type (international)	Positive right with UDHR-style goals, plus a structural no-aid bar; compulsory schooling qualified "to the extent permitted by the facilities of the state"
Funding requirement	None in the text. Ley 85-2018 requires at least 70% of the department budget for direct school services (art. 2.02) and equity standards per student and per school (art. 2.04(b)(11))
Justiciability	Justiciable; claims decided on the merits under a "direct and substantial interference" standard (2018)
Enforcement category	Right recognized, not enforced (U.S.); justiciable, no systemic ruling (international). Flags: no-aid clause enforced 1994, reversed 2018; subgroup remedy since 2002; PROMESA
Compulsory ages	5 to 18 (Ley 85-2018, art. 1.04(a))
Federal layer	No federal education right (Rodriguez, 1973); Financial Oversight and Management Board certifies budgets (PROMESA, 2016)

Text and drafting history

Article II, Section 5 gives every person a right to an education directed to the full development of the personality and to respect for human rights. It requires a free, wholly non-sectarian public system, makes elementary and secondary instruction free and elementary attendance compulsory to the extent the state's facilities permit, and bars public funds for schools other than the state's. The Constitutional Convention also wrote Section 20, a list of social rights drawn from the Universal Declaration of Human Rights that began with "the right of every person to receive free elementary and secondary education." Congress approved the constitution in Public Law 82-447 except for Section 20, and made Section 5 ineffective until amended to exempt private elementary schools from compulsory public attendance. What survives is an individual right with a progressive-realization qualifier, and clear evidence of intent against a broader socio-economic floor.

Judicial treatment

Table 6. Principal cases on the right to education in Puerto Rico

Year	Case	Holding and significance
2025	Rosa Lydia Vélez, damages phase (PROMESA Title III)	Federal court authorized the oversight board to offer settlement on about 6,500 pre-2017 damages claims; the monitor's 2023-24 report found 62,005 students without therapies within 30 days of their annual IEP review
2018	Asoc. de Maestros v. Dept. de Educación, 2018 TSPR 150	Reversed a trial ruling striking Alianza charters and Libre Selección vouchers; upheld both 5-3 by sentencia, departing from Torres
2018	Meléndez León v. Keleher	Vacated an injunction against nine closures in the Arecibo region; closures did not "directly and substantially interfere" with the right to education
2002	Rosa Lydia Vélez v. Aponte Roque, K PE 80-1738	Stipulated judgment with 87 stipulations, a court monitor and daily fines (later $11,000) for special-education services; filed 1980, still active
1994	Asoc. de Maestros v. Torres, 137 D.P.R. 528	Struck the private-school voucher component of Ley 71-1993 under the §5 no-aid clause

Note: Both 2018 rulings were issued as sentencias, which under Puerto Rico practice do not set binding precedent.

The Meléndez León standard is the closest the court has come to adequacy doctrine. It recognizes a judicially cognizable right but sets a high bar, nearer the absolute-deprivation reasoning of Rodriguez than the qualitative "sound basic" or "thorough and efficient" standards of state adequacy litigation. The longest-running enforcement is the Rosa Lydia Vélez class action: 45 years of supervised compliance, but for students with disabilities and grounded as much in federal special-education law as in Section 5.

Federal and fiscal overlay

- **No federal floor.** As in the states, San Antonio ISD v. Rodriguez (1973) forecloses a federal right to education. Equal protection reaches Puerto Rico (Examining Board v. Flores de Otero, 1976), but Congress may treat Puerto Rico differently from the states on a rational basis (Harris v. Rosario, 1980; United States v. Vaello Madero, 2022). Federal funding formulas that disadvantage the territory are therefore hard to challenge.
- **Fiscal oversight.** Since 2016 the Financial Oversight and Management Board has certified Puerto Rico's fiscal plans and budgets, including education. The 2018 consolidation closed about 255 schools in one year, and the board and department were reviewing about 200 more low-enrolment schools in 2025. Any court-ordered or legislated need-based formula would have to fit within, or be written into, a certified fiscal plan.

Taken together, the constitutional text promises more than the case law has delivered, and the fiscal structure limits what either courts or the legislature could deliver. The resource analysis in this brief shows the consequence: a system that spends almost the same per pupil in high- and low-need schools.