

Memorandum

From: PSEA Research

Date: August 8, 2022

Re: The revenue and staffing implications of the Mastriano proposal for property tax elimination and school vouchers for school districts, charter schools, vo-techs and intermediate units.

The Mastriano plan proposes depositing state appropriations for education into accounts administered by the state Treasurer for each Pennsylvania student to use to pay for education at a public, charter, private, or home school.

“For starters, we need to reimagine how we fund education. By redirecting our state funds to follow students instead of systems, not only will we expand choice on where parents can send their children to school, but we will also save money. Currently, Pennsylvania spends over \$19,000 per student each school year according to Department of Education statistics for 2019-2020.”

- Doug Mastriano, Op-Ed, Feb. 9, 2022
<https://senatormastriano.com/2022/02/09/op-ed-the-case-for-property-tax-elimination/>

This voucher proposal is coupled with local property tax elimination. In setting forth his proposal, Mastriano cites current expenditures divided by ADM for school districts¹ and proposes that, instead of funding each student at \$19,000, we fund each student at \$9,000 or \$10,000.²

We modeled the effect of this proposal on school districts, charter schools, vo-techs and intermediate units using 2019-20 data³ and assumed:

- Local non-property taxes and federal revenues would be unaffected.
- State funds would be used to entirely fund \$9,000 per student voucher.

We will begin summarizing the outcomes of our modeling focusing on school districts. We estimate total revenues available to school districts will decline from \$33.6 billion to \$22.4 billion, a decline of 33% or in dollar terms, \$11 billion. This would reduce total revenues per

¹ <https://www.education.pa.gov/Documents/Teachers-Administrators/School%20Finances/Finances/Summary%20of%20AFR%20Data/AFR%20Data%20Summary%20Level/Finances%20AFR%20Expenditures%202019-2020.xlsx>

² <https://www.youtube.com/shorts/HGmCpNlnJPo>

³ The financial data used for Chartiers-Houston was from 2018-19 as the 2019-20 data was not available. No financial data was available in any of the last five years for the Pittsburgh City AVTS and thus is excluded from our analysis. Financial data for intermediate unit 26 and the Philadelphia city AVTS is added to the analysis of the Philadelphia city school district, and revenue and expenditure data for intermediate unit 2 was incorporated into the Pittsburgh city school district.

ADM to \$13,055.⁴ We arrive at \$22.4 billion by eliminating property taxes (-\$14.3 billion) and replacing current state revenues of \$12.3 billion with state revenues implied by multiplying \$9,000 by 1,717,327 (ADM⁵) which equals \$15.5 billion (\$33.58 bil. - \$14.29 bil. - \$12.34 bil. + \$15.46 bil = \$22.42 billion).⁶

To estimate the change in payrolls impacted by a \$11 billion cut in revenues, we made the following assumptions:

- Identify district debt service payments totaling \$3.77 billion as fixed expenditures. Debt payments could not be adjusted down even as revenues available declined.
- Expenditures on supplies and property could only be reduced by 5% to \$1.20 billion.
- We held purchased service expenditures recorded under special programs (function code 1200) as fixed.
- We eliminated entirely purchased services recorded as tuition payments on regular programs (function code 1100) for other LEAS (object code 561), and all tuition payments to Charters or CTCs. We assume under the proposed voucher system, school districts will no longer make payments to other school districts, charters or vo-techs as all those entities will receive their tuition directly from students enrolled in their schools.
- Any remaining purchased services were reduced by 5% to arrive at a total of \$4.27 billion.

We then summed together:

- debt service (\$3.77 billion),
- supplies and equipment (\$1.20 billion),
- purchased services (\$4.27 billion)

This sums to \$9.24 billion in fixed expenditures (28% of total revenues before cuts). We then subtract this \$9.1 billion figure from revenues available after cuts to arrive at \$13.18 billion in revenues.

⁴ If on the other hand Mastriano meant that total revenues in school districts from all sources (local, state, and federal) will fall from \$19,000 to \$9,000 that would instead be a 53% decline in revenues or in dollar terms a decline of \$17.6 billion. Total expenditures per student of \$9,000 last prevailed in Pennsylvania in 2001.

⁵ We assume enrollment, defined here as Average Daily Membership, is unchanged after the implementation of the Mastriano plan. This makes our estimate of the revenue and employment loss lower. In other words, by assuming no additional students use vouchers to attend other schools, our estimate represents a conservative best-case scenario.

⁶ As modeled, the Mastriano plan will require an increase in state funding for school districts from 2019-20 levels of \$3.1 billion. The plan also adds new expenditures for education in that it opens participation in the voucher program to any student enrolled in a private school (210,838 students) or being schooled at home (25,979 students). The vouchers for these students sum up to \$2.1 billion. Applying the voucher proposal to CTCs, Charters and IUs brings the total state commitment up to \$19.4 billion (see Table 2 on page 5). In 2019-20 all state revenues recorded on the AFRs for School Districts, Charters, CTCs, and IUs summed to \$13.2 billion, requiring Mr. Mastriano to propose some combination of higher state taxes and reductions in state spending on non-education line items in the amount of \$6.3 billion to fully fund his proposal as we have interpreted it here.

We apportioned this revenue to the amount available to payrolls by calculating the share that 2019-20 payrolls (\$20.55 billion) represented of revenues minus fixed costs (\$20.55 billion payroll/ (\$33.58 billion total district revenues - \$9.24 billion fixed costs) = 84%).

Multiplying 84% by revenue available after deducting fixed costs (\$13.18 billion) yields \$11.12 billion in revenue available for payrolls a decline of \$9.42 billion from 2019-20 payrolls of \$20.55 billion.

To calculate the level of total employment of all staff (professionals and support) possible with a total payroll amount of \$11.12 billion, we apportioned this amount into the payroll available for professional staff and the payroll available for support staff. This was done using a combination of data from the professional personnel file and the AFRs. Here is the process we used:

- We estimated total compensation on the professional personnel file by dividing salaries by the share that salaries represent of total compensation on the AFR.
- Using this estimate of total compensation, we estimated the share that professional staff compensation represents of total compensation for all employees reported on each district's AFR.
- This share is then applied to the \$11.12 billion total revenue available for payroll to determine the payroll available to **professional staff** after the proposed cuts.
- This figure is converted into a payroll count by sorting all employees listed on the professional personnel file⁷ by seniority and selecting the cumulative sum of total compensation closest to the available revenues for professional payrolls.
- Since the Commonwealth of Pennsylvania only collects support staff head counts, our estimate of the payroll reduction for support staff doesn't take into account seniority. We estimate layoffs by dividing current total compensation available for **support staff** by the total number of support staff arriving at a figure for the average cost of a support staff employee.
- We divide the total payroll available for support staff after the proposed cuts by the average cost of a support staff employee to arrive at a new total count for support staff.

The bottom line: before the proposed revenue cuts, we estimate total employment for all professional and support staff (full-time equivalent) as 205,372. We estimate total employment after the proposed cuts at 103,261, yielding a total decline in employment of 102,111 or 50%.⁸

This procedure is done for each school district individually and the statewide totals reported in Table A in the data appendix represent the sum of those individual school district figures. These

⁷ We first eliminated any professional staff with a missing salary or a salary less than \$1000.

⁸ By assuming certain non-payroll expenditures are fixed and or only reasonably reduceable by 5% payroll expenditures absorb 84% of the proposed \$11.2 billion in cuts. By way of comparison payrolls represented 61% of total revenues in 2019-20 (\$20.55 billion / \$33.58 billion).

procedures were repeated for charter schools⁹ (Table B), vo-techs¹⁰ (Table C), and intermediate units¹¹ (Table D). Table 1 (below) summarizes the system wide revenue and employment changes under the Mastriano Plan. Altogether school districts, charter schools, vo-techs and intermediate units as a group would absorb a decline in revenues of \$12.75 billion a 33% decline from current levels. Employment of all professionals including support professionals and administrators would decline by 118,700 or 49%. The ratio of students to teachers would more than double growing from 16 students per teacher to 33 students per teacher.

Table 1.

System Wide Revenue & Staffing Changes Under Doug Mastriano's Education Finance Proposal					
Local Education Agency	Decline in Revenues (Billions)	Percent Decline in Revenues	Total Staffing Decline	Percent Decline in Staffing	Percent Increase in the ratio of students to teachers
School Districts	-\$11.17	-33%	(102,111)	-50%	107%
Charter Schools	-\$0.89	-36%	(9,987)	-59%	173%
Career and Technical Center	-\$0.11	-17%	(1,149)	-29%	67%
Intermediate Units	-\$0.59	-30%	(5,457)	-40%	73%
Total	-\$12.75	-33%	(118,704)	-49%	109%

Source. PSEA Research based on Pennsylvania Department of Education Data.

⁹ In estimating the effect of the Mastriano Plan on charter schools we assume charter schools which are currently almost exclusively financed out of school district revenues will now be financed by a \$9,000 voucher for each student they enroll. Under the current finance system charters are receiving \$14,910 per ADM. Our model assumes enrollment is unchanged under the voucher proposal. While it is possible that enrollment might increase at charters under the proposed voucher program the enrollment increase wouldn't be sufficient to prevent a large decline in available revenues. For instance if we assume a relatively large increase of enrollment in charters of 10% the revenue loss compared to the current system falls \$132 million from \$889 million to \$757 million (a 31% decline in revenues from current).

¹⁰ We assume vo-techs which currently receive 67% of their revenue from member districts (\$13,038 per ADM on average) will be funded exclusively through a \$9,000 voucher for each student they enroll. The projected revenue decline statewide for vo-techs is 29% (compared to 33% for school districts and 36% for charter schools). The smaller revenue loss reflects that a subset of vo-techs (23 of 66) would in effect receive more revenue from \$9,000 voucher than they are currently receiving in total from their sending districts and state funds.

¹¹ We assume that intermediate units will continue to receive tuition from their member districts and thus the primary means by which revenues decline at intermediate units is through a decline in state funds per enrolled student from \$61,765 to \$9,000, a decline in dollar terms of \$590 million or 30%.

Table 2.

State Revenue Required To Fund The Mastriano Plan

Local Education Agency	Current (2019-20)	Projected @ 9,000 Per Student
School Districts	12,335,626,240	15,455,941,875
Charter Schools	24,169,860	1,309,642,594
Career and Technical Centers	117,435,680	424,098,000
Intermediate Units	691,397,696	100,746,000
Private	0	1,897,542,000
Home School	0	233,811,000
Total	13,168,629,476	19,421,781,469
	New Revenue -->	6,253,151,993

Source. PSEA Research based on Pennsylvania Department of Education Data.

Data Appendix

Table A: School Districts

Revenue & Employment Effects For All School Districts¹ of Doug Mastriano's Education Finance Proposal

Row #	Line Item	\$
Change in Revenues		
1	Total Revenues	33,584,078,848
2	Real Estate Taxes	14,285,431,808
3	Total Revenues Excluding Real Estate Taxes (Row 1 - Row 2)	19,298,647,040
4	State Revenue	12,335,626,240
5	Remaining Revenues: (Row 3 - Row 4)	6,963,020,800
6	Average Daily Membership	1,717,327
7	Proposed New State Revenue (\$9,000 * Average Daily Membership)	15,455,941,875
8	Remaining Revenues + Proposed New State Revenue (Row 5 + Row 7)	22,418,962,675
9	Change in Revenues (Row 8 - Row 1)	-11,165,116,173
10	% Change in Revenues	-33%
Change in School Employment		
District Expenditures Which Are Assumed Fixed		
11	Debt Service	3,771,959,552
12	Supplies	948,385,088
13	Property	251,742,416
14	Purchased Services	4,267,547,648
15	Total Fixed Costs (Row 11 + Row 12 + Row 13 + Row 14)	9,239,634,704
16	Revenues Remaining for All Other Expenditures (Row 8 - Row 15)	13,179,327,971
17	Labor Share of Non-Fixed Revenues (Row 18 / Row 1 - Row 15)	84%
18	Before Cuts: Total Payroll Expenditures	20,545,869,824
19	After Cuts: Total Payroll Expenditures (Row 16 * Row 17)	11,122,897,498
20	Change in Payroll Expenditures (Row 19 - Row 18)	(9,422,972,326)
21	Percent Change in Payroll Expenditures (Row 20 / Row 18)	-46%
22	Before Cuts: Total Number of Professional and Support Personnel	205,372
23	After Cuts: Total Number of Professional and Support Personnel	103,261
24	Layoffs (Change)	(102,111)
25	Percent Change	-50%
26	Before Cuts: Ratio of Students (ADM) to Teachers	16
27	After Cuts: Ratio of Students (ADM) to Teachers	34
28	Percent Change in Ratio of Students (ADM) to Teachers	107%

¹ Statewide totals are summed from district level estimates based on the general fund revenue and expenditure data for 500 school districts as reported on their annual financial reports (form PDE-2057) to the Pennsylvania Department of Education. Annual financial report data is available online at ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData. Data for Philadelphia School District is calculated after adding in revenue and expenditure from IU 26 and the Philadelphia City AVTS. Data for the Pittsburgh School District is calculated after adding in revenue and expenditure data for IU 2, financial data was not available for the Pittsburgh AVTS and thus is excluded from this analysis.

Note. In 2019-20 total state revenues recorded by school districts equaled \$12.3 billion. This model assumes the \$9,000 promised to each student (a commitment that sums to \$15.5 billion) is funded entirely by the state thus requiring an additional \$3.1 billion in state appropriations to fully fund.

Source. PSEA Research based on Pennsylvania Department of Education Data, for questions or errors to report contact Mark Price, Director of Research for School Funding and Finance | Labor Economist @ mprice@psea.org

Table B: Charter Schools

Revenue & Employment Effects For All Charter Schools¹ of Doug Mastriano's Education Finance Proposal

Row #	Line Item	\$
Change in Revenues		
1	Total Revenues	2,465,331,456
2	Receipts from other LEAs	2,170,730,240
3	Total Revenues Excluding Receipts from Other LEAs (Row 1 - Row 2)	294,601,216
4	State Revenue	24,169,860
5	Remaining Revenues: (Row 3 - Row 4)	270,431,356
6	ADM	145,516
7	Proposed New State Revenue (\$9,000 * Enrollment)	1,309,642,594
8	Remaining Revenues + Proposed New State Revenue (Row 5 + Row 7)	1,580,073,950
9	Change in Revenues (Row 8 - Row 1)	(885,257,506)
10	% Change in Revenues	-36%
Change in School Employment		
District Expenditures Which Are Assumed Fixed		
11	Debt Service	26,764,258
12	Supplies	138,434,816
13	Property	47,825,568
14	Purchased Services	619,234,816
15	Total Fixed Costs (Row 11 + Row 12 + Row 13 + Row 14)	832,259,456
16	Revenues Remaining for All Other Expenditures (Row 8 - Row 15)	747,814,494
17	Labor Share of Non-Fixed Revenues (Row 16 / Row 15)	82%
18	Before Cuts: Total Payroll Expenditures	1,335,513,088
19	After Cuts: Total Payroll Expenditures (Row 16 * Row 17)	611,556,665
20	Change in Payroll Expenditures (Row 19 - Row 18)	(723,956,423)
21	Percent Change in Payroll Expenditures (Row 20 / Row 18)	-54%
22	Before Cuts: Total Number of Professional and Support Personnel	16,849
23	After Cuts: Total Number of Professional and Support Personnel	6,861
24	Layoffs (Change)	(9,987)
25	Percent Change	-59%
26	Before Cuts: Ratio of Students (ADM) to Teachers	16
27	After Cuts: Ratio of Students (ADM) to Teachers	43
28	Percent Change in Ratio of Students (ADM) to Teachers	173%

¹ Statewide totals are summed from individual charter school level estimates based on the general fund revenue and expenditure data for 176 Charter Schools as reported on their annual financial reports (form PDE-2057) to the Pennsylvania Department of Education. Annual financial report data is available online at ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData

Note. Charter schools are largely funded out of tuition drawn from school district revenues (totaling in 2019-20 \$2.2 billion and equaling 88% of all charter school revenue). In the same year total state revenues recorded by charter schools equaled \$24 million. This model assumes the \$9,000 promised to each student (a commitment that sums to \$1.3 billion) is funded entirely by the state thus requiring an additional \$1.3 billion in state appropriations to fully fund.

Source. PSEA Research based on Pennsylvania Department of Education Data, for questions or errors to report contact Mark Price, Director of Research for School Funding and Finance | Labor Economist @ mprice@psea.org

Table C: Career and Technical Centers

Revenue & Employment Effects For All Career and Technical Centers¹ of Doug Mastriano's Education Finance Proposal

Row #	Line Item	\$
Change in Revenues		
1	Total Revenues	614,399,936
2	Receipts from Member Districts	411,687,968
3	Total Revenues Excluding Receipts from Other LEAs (Row 1 - Row 2)	202,711,968
4	State Revenue	117,435,680
5	Remaining Revenues: (Row 3 - Row 4)	85,276,288
6	Enrollment	47,122
7	Proposed New State Revenue (\$9,000 * Enrollment)	424,098,000
8	Remaining Revenues + Proposed New State Revenue (Row 5 + Row 7)	509,374,288
9	Change in Revenues (Row 8 - Row 1)	(105,025,648)
10	% Change in Revenues	-17%
Change in School Employment		
District Expenditures Which Are Assumed Fixed		
11	Debt Service	30,054,764
12	Supplies	42,607,980
13	Property	19,051,828
14	Purchased Services	61,004,512
15	Total Fixed Costs (Row 11 + Row 12 + Row 13 + Row 14)	152,719,088
16	Revenues Remaining for All Other Expenditures (Row 8 - Row 15)	356,655,200
17	Labor Share of Non-Fixed Revenues (Row 16 / Row 15)	92%
18	Before Cuts: Total Payroll Expenditures	426,334,144
19	After Cuts: Total Payroll Expenditures (Row 16 * Row 17)	329,349,355
20	Change in Payroll Expenditures (Row 19 - Row 18)	(96,984,789)
21	Percent Change in Payroll Expenditures (Row 20 / Row 18)	-23%
22	Before Cuts: Total Number of Professional and Support Personnel	3,940
23	After Cuts: Total Number of Professional and Support Personnel	2,791
24	Layoffs (Change)	(1,149)
25	Percent Change	-29%
26	Before Cuts: Ratio of Students (ADM) to Teachers	31
27	After Cuts: Ratio of Students (ADM) to Teachers	52
28	Percent Change in Ratio of Students (ADM) to Teachers	67%

¹ Statewide totals are summed from individual vo-tech level estimates based on the general fund revenue and expenditure data for 66 vo-techs as reported on their annual financial reports (form PDE-2057) to the Pennsylvania Department of Education. Annual financial report data is available online at ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData. No financial data was available for the Pittsburgh AVTS. The financial data for the Philadelphia City AVTS is not included here but summarized as part of the overall effect of the Philadelphia School District in Table A.

Note. In 2019-20 two-thirds of vo-tech revenues were represented by payments from school districts (\$412 million). In the same year total state revenues recorded by vo-techs equaled \$117 million. This model assumes the \$9,000 promised to each student (a commitment that sums to \$424 million) is funded entirely by the state thus requiring an additional \$307 million in state appropriations to fully fund.

Source. PSEA Research based on Pennsylvania Department of Education Data, for questions or errors to report contact Mark Price, Director of Research for School Funding and Finance | Labor Economist @ mprice@psea.org

Table D: Intermediate Units

Revenue & Employment Effects For All School Districts¹ of Doug Mastriano's Education Finance Proposal

Row #	Line Item	\$
Change in Revenues		
1	Total Revenues	1,978,889,600
2		
3		
4	State Revenue	691,397,696
5	Remaining Revenues: (Row 1 - Row 4)	1,287,491,904
6	Enrollment	11,194
7	Proposed New State Revenue (\$9,000 * Enrollment)	100,746,000
8	Remaining Revenues + Proposed New State Revenue (Row 5 + Row 7)	1,388,237,904
9	Change in Revenues (Row 8 - Row 1)	(590,651,696)
10	% Change in Revenues	-30%
Change in School Employment		
District Expenditures Which Are Assumed Fixed		
11	Debt Service	13,254,308
12	Supplies	56,215,600
13	Property	5,604,013
14	Purchased Services	332,990,880
15	Total Fixed Costs (Row 11 + Row 12 + Row 13 + Row 14)	408,064,801
16	Revenues Remaining for All Other Expenditures (Row 8 - Row 15)	980,173,103
17	Labor Share of Non-Fixed Revenues (Row 16 / Row 1 - Row 15)	78%
18	Total Payroll Expenditures	1,223,116,416
19	After Cuts: Total Payroll Expenditures (Row 16 * Row 17)	763,207,847
20	Change in Payroll Expenditures (Row 19 - Row 18)	(459,908,569)
21	Percent Change in Payroll Expenditures (Row 20 / Row 18)	-38%
22	Before Cuts: Total Number of Professional and Support Personnel	13,742
23	After Cuts: Total Number of Professional and Support Personnel	8,285
24	Layoffs (Change)	(5,457)
25	Percent Change	-40%
26	Before Cuts: Ratio of Students (ADM) to Teachers	3
27	After Cuts: Ratio of Students (ADM) to Teachers	5
28	Percent Change in Ratio of Students (ADM) to Teachers	73%

¹ Statewide totals are summed from individual intermediate unit level estimates based on the general fund revenue and expenditure data for 27 intermediate units as reported on their annual financial reports (form PDE-2057) to the Pennsylvania Department of Education. Financial data for IU 26 (Philadelphia) and IU 2 (Pittsburgh) are not included here and instead incorporated into the school district level estimates for Philadelphia City and Pittsburgh City School Districts summarized in Table A. Annual financial report data is available online at ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData

Note. A simplifying assumption in our analysis in Table A (School Districts) and Table B (Charter Schools) is that tuition payments to intermediate units and expenditures for purchased services for special education (typically paid to intermediate units) are assumed to be fixed. Thus here in analyzing the impact of the Mastriano Plan on intermediate unit finances we assume all the effects operate through state revenues. In 2019-20 intermediate units recorded total state revenues of \$691 million. The new state revenue for intermediate units is determined by multiplying total enrollment of 11,194 by \$9,000 yielding total state revenues under the Mastriano Plan of \$101 million; a reduction in state funding for intermediate units of \$591 million.

Source. PSEA Research based on Pennsylvania Department of Education Data, for questions or errors to report contact Mark Price, Director of Research for School Funding and Finance | Labor Economist @ mprice@psea.org