Balancing Equity and Quality in Public School Funding
How a Progressive Partial Recapture System Can Achieve the Best of Both Worlds in Education

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PWR 2KTA - Rebel with a Cause: The Rhetoric of Giving a Damn

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12/1/2018

Introduction

In 1973, Demitrio Rodriguez, a disgruntled parent from the poor, heavily Latino district of Edgewood in San Antonio, Texas, appeared before the Supreme Court of the United States to argue that Texas' system of using property taxes to fund public education was unconstitutional. Rodriguez, whose two children had attended an elementary school with few certified teachers and a severe lack of resources, believed that the vast disparity in quality of education between the poor and rich districts of San Antonio was indicative of a system that violated the Equal Protection Clause of the Fourteenth Amendment. Though Rodriguez won the legal battle at a state level, the supreme court narrowly ruled 5-4 that the system was in fact not unconstitutional, allowing Texas and every other state to continue funding public education through property taxes (*San Antonio Indep. Sch. Dist. v. Rodriguez,* 1973).

Almost twenty years earlier, the case of *Brown v. Board of Edu*cation faced the Supreme Court of the United States. A critical point in the civil rights movement, this case established that the fourteenth amendment ensures that access to education "is a right which must be made available to all on equal terms" (*San Antonio Indep. Sch. Dist. v. Rodriguez,* 1973). Rodriguez believed that the usage of property taxes in funding public education deprived poor students of access to equal education, hence going against the ruling of *Brown v. Board of Education,* but the supreme court disagreed. Thurgood Marshall, a lawyer for Brown who then went on to become a supreme court justice for the case of *San Antonio Indep. Sch. Dist. v. Rodriguez*, gave

a harsh dissent, claiming that "[the funding system] produces a discriminatory impact on substantial numbers of the school age children of the State of Texas" and calling the ruling "an emasculation of the Equal Protection Clause" (*San Antonio Indep. Sch. Dist. v. Rodriguez,* 1973).

Though history has heavily disputed how much of an effect school funding has on educational outcomes, a recent study put out by the National Bureau of Economic Research seems to have arrived at a concrete answer. In particular, the study found that across the United States, increases to school funding have caused "increases in the achievement of students in these districts," noting that "the implied effect of school resources on educational achievement is large" (Lafortune et al., 2016). With this study in mind, it is clear that disparities in funding for education can easily lead to disparities in quality of education, so in order to attain the goal of equity in education, funding disparities must be eliminated.

The reasons for opposing a property tax-centric system are simple: wealthier districts raise more revenue in property taxes, which creates strong disparities in the funding levels and consequently qualities of education across rich and poor districts. Because the supreme court failed to rule such a system as unconstitutional, it became each individual state's responsibility to make their education funding more equitable. Most states have implemented some mechanism which calculates a minimum amount of funding that each district needs to successfully thrive and then utilizes state funds to compensate for the imbalance of local funds. Though these mechanisms prevent the poorest districts from being woefully underfunded, they still face issues of funding

disparity, often due to the funds that a district raises above the minimum funding level that states outline. Since most states simply allow districts to keep funds raised above the minimum level, wealthier districts are still able to raise more funds than poorer districts through higher local taxes, creating a funding disparity. Some states, like Texas, have opted to recapture all funds raised above the minimum level into a collective state education fund to be redistributed to districts that need it more. Unfortunately, this and similar systems have faced heavy criticisms for being less than successful (Bravo, 2017). As a compromise between allowing districts to raise as much money as they want and recapturing all overflow funds, states should implement a progressive partial recapture (PPR) policy in order to allow districts that wish to raise more funds to do so while still maintaining equity in school funding.

What is Progressive Partial Recapture?

In general, funding for public schools is incredibly complex and nuanced, with approaches varying quite a bit from state to state, but nonetheless, roughly three-quarters of states base their funding around a model known as Foundation Grants. The way a foundation grant works is that the state analyzes each district and comes up with an amount of money, per student, that it believes is necessary for that district to educate its students. This amount depends on a couple of factors, including the number of low-income students and students with special needs (this can range from English Language Learners to students with learning disabilities). After the state calculates this amount, generally referred to as a foundation budget, the state then

calculates how much the district can reasonably pay, where property wealth is usually

the most important factor, but other factors such as average income are also included.

Then, after these two amounts are calculated, the state uses federal and state funds to

make up the difference between the foundation budget for a district and what the

district is reasonably able to pay. Figure 1 demonstrates this policy in action in

Massachusetts, by comparing the budgets of Lynn, a poorer district, and Newton, a
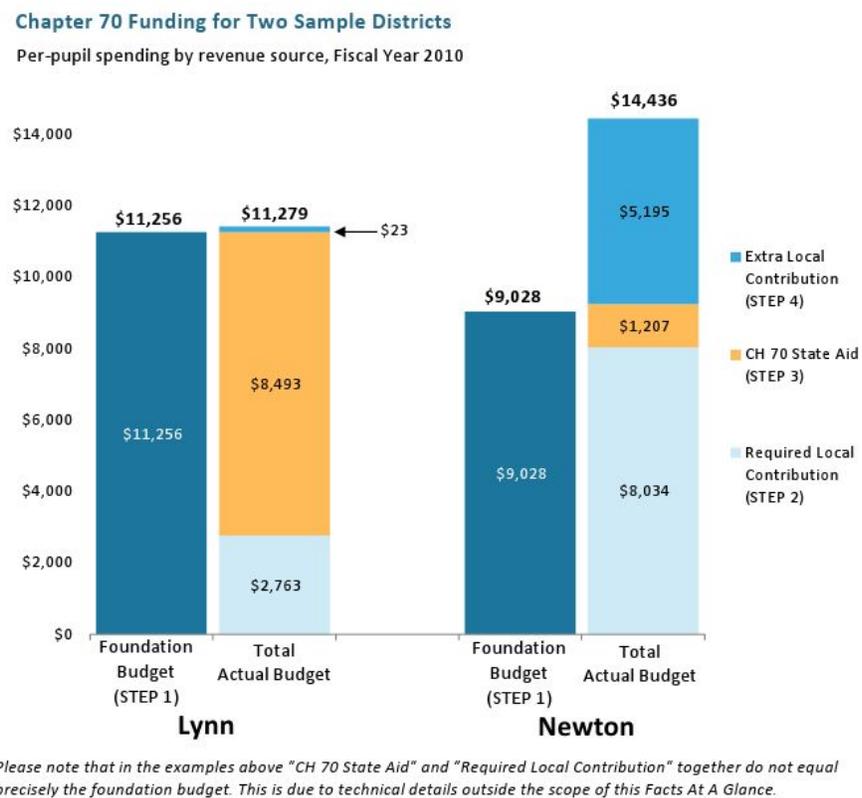
wealthier district (MassBudget, 2010).

Chapter 70 Funding for Two Sample Districts
Per-pupil spending by revenue source, Fiscal Year 2010

Please note that in the examples above "CH 70 State Aid" and "Required Local Contribution" together do not equal precisely the foundation budget. This is due to technical details outside the scope of this Facts At A Glance.

Figure 1: Public School Funding for Two MA Districts (MassBudget)

As shown in Figure 1, the wealthier district, Newton, despite having a smaller

foundation budget due to having fewer low-income students, has a larger overall

budget because it generates a significant amount of overflow money. The idea of PPR is to curb this excess money and distribute it in a way that generates more equitable outcomes. Specifically, PPR works as follows: when a district raises funds above its required local contribution, a certain fraction of those funds are recaptured by the state. Additionally, the fraction of overflow funds that the state recaptures from a given district is directly proportional to the relative wealth of that district. For example, the poorest 20% of districts will be allowed to keep all additional funds raised, the next 20% of districts will be allowed to keep 90% of funds raised, and so on up to the wealthiest 20% of districts, which will be allowed to keep only 50% of funds raised. (The specific numbers given here are merely suggestive, and individual states can adjust these numbers according to their needs). The money that is recaptured from each school district is then put into a collective education pool, to be redistributed to districts which are most in need.

Why Progressive Partial Recapture?

Funding systems which allow districts to raise as much overflow budget as they want are simply incompatible with the hopes of achieving equity in school funding. The difficulties here are twofold. First, because property wealth is often clustered in the wealthiest districts of any given state, these districts, even through just their minimum contributions, can often be above the foundation budget, whereas most other districts' budget will be precisely the foundation budget, since it is what the state makes up for, causing an immediate disparity. Perhaps a bigger issue, however, is that parents in

wealthier districts often emphatically want their children to be getting the best possible education, and are willing to raise property taxes in order to get more money into the schooling system. This causes vast disparities between the quality of education in wealthier and poorer districts, ultimately perpetuating the cycle of wealth inequality. This disparity was highlighted in a report recently released by The Education Trust, in which it was calculated that after adjusting for the additional needs of low-income students, the poorest districts of a given state received on average $2,000 (or 16%) less funding per student than the wealthiest districts (Morgan & Amerikaner, 2018).

Thus, in order to achieve equity in school funding, some form of recapture is necessary. In principle, a full recapture policy seems perfect in this regard. The way such a policy would work is that all overflow funds above a certain threshold get recaptured and redistributed to districts that need it more. If the recapture threshold is chosen to be the right amount, then near perfect equity can be established. In fact, this is precisely what Texas implemented in 1993, in a plan notoriously known as the "Robin Hood Plan." As seen in figure 2, this system is fairly effective in minimizing gaps in funding across districts with different levels of property wealth, but this misses the full picture. In particular, some districts with high property values serve a large portion of low-income students. For example, in the Austin Independent Schools District, where 57% of students come from low-income backgrounds, the property wealth is high enough for recapture to kick in, which is costing the district an enormous 406 million dollars in education funding. Since Texas schools are already largely underfunded, this amount has had a rough effect on Austin schools (Bravo, 2017).

Average Local and State Funding per Student, by Property Wealth of District, Texas, 2016–17

Funding per student

■ Funding entitlement ■ Local share from tax above 1% ■ State share from tax above 1%

Lowest decile   *Student-weighted decile of property wealth*   Highest decile
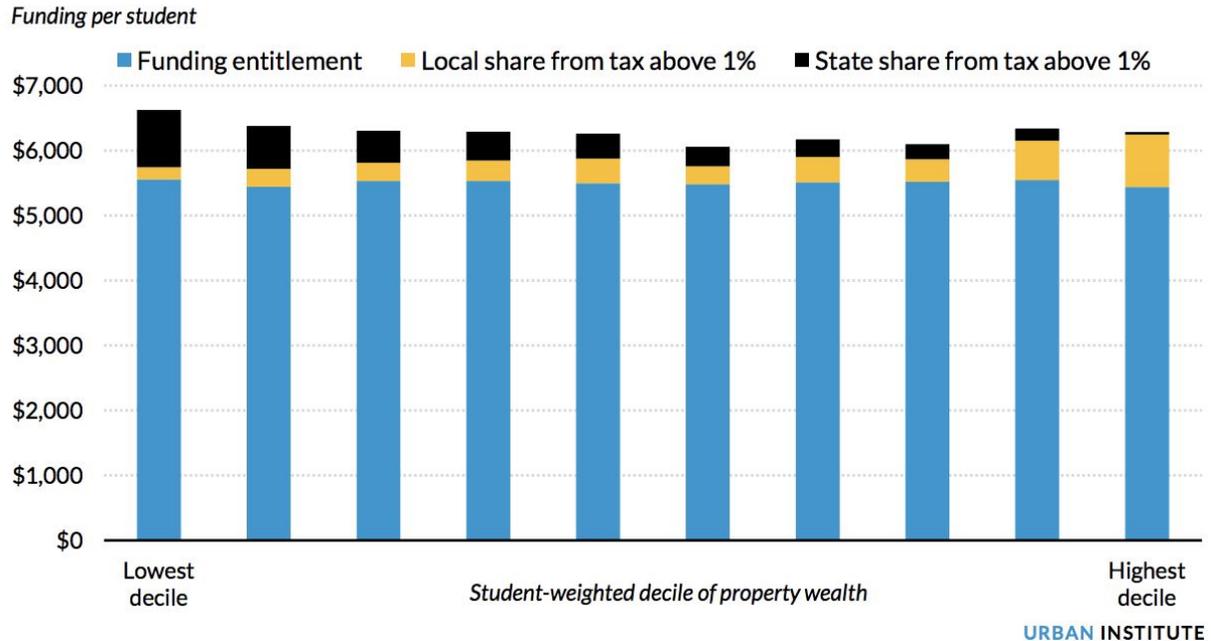
URBAN INSTITUTE

Figure 2: School Funding by District, as Ranked According to Property Wealth (Urban Institute)

The issues of recapture are more broad than just what Texas is experiencing. In general, quality of education often tends to correlate with property value, and so in a recapture system where funds based on property taxes don't go to local students, property values can fall. This causes lower revenue to be generated from property taxes, and consequently if a state wants to keep aiding low-income districts' funding through recapture, then it needs to lower the threshold for recapture, and consequently the wealthier districts providing the recapture funds receive less funding for education, which causes property values to continue to fall, and the cycle repeats itself.

The problems just outlined regarding systems that don't utilize any form of recapture, and those that utilize some sort of threshold recapture are fixed with a PPR system. For starters, the vast disparity among funding between low-income districts

and high-income districts is, at the very least, stifled by the implementation of a partial recapture system. In particular, although wealthy districts will still be allowed to raise as much money for education as they wish, the districts can only keep a certain fraction of that money. In the example earlier with the wealthiest districts keeping 50% and poorest districts keeping 100%, the effect of this policy is that *at the very least* the portion of education funding disparity caused by overflow funds is cut in half. Additionally, since the funds then get channeled back into the districts that serve low-income communities, the budget for schools in the poorest districts increases, meaning that the disparity caused by overflow funds is reduced by even more than 50%.

PPR also fixes issues like those in Texas with systems that rely on some form of threshold recapture. In particular, because districts are still allowed to raise as much money as they want towards education, those with high property values can maintain high qualities of education, thus ensuring that property values don't fall. Because the amount of recaptured funds is determined by a percentage rather than a threshold, this ensures that there is always money being funneled into the recapture budget, so that thresholds don't have to keep being lowered and states need not fall into the cycle described earlier. Finally, in the case of districts like Austin which serve low-income communities despite having high property wealth, the revenue generated by property taxes, instead of being capped off, can instead now actually be used to fund education in those districts.

Not only does PPR serve as a balance between no recapture policies and threshold recapture policies, it also independently motivates a system which provides higher funding to education throughout the state. This argument is based on the simple idea that parents in the wealthiest districts across the country want their children to receive the best possible education, which can mean increasing spending. This is seen, for example, in the exorbitant amount of extra local funding that Newton, MA generated, as seen in figure 1. Specifically, since PPR ensures that the amount of extra local funding for education that a district receives is directly proportional to how much extra funding it raises, wealthy school districts will always continue to be rewarded per every dollar above the minimum that they raise. This is in contrast to a threshold recapture system, in which, after a certain point, districts stop benefitting from extra money they raise, so wealthy districts have no motivation to raise any money above the recapture threshold. In a PPR system, districts always have motivation to raise money for education, so in wealthy enough districts, money will continue to be raised until the quality of education is sufficient to meet the parents' standards. Since a portion of overflow funds always gets redistributed to poorer districts, the more overflow funds that wealthier districts get, the more funds that poorer districts get as well. Instead of being left behind, the poorer districts are raised up with the wealthier districts, and the result is that overall amount of funding to a state's education goes up.

PPR is certainly not a perfect equalizer in terms of funding distribution. Although it has the potential to cut funding disparities in half or even more, by nature of being a proportional recapture, it is essentially impossible for PPR alone to cause the funding

disparities to disappear altogether. In fact, it isn't even clear that a system that generates perfect equity of funding while maintaining quality of education is even possible. As addressed above, when a state doesn't use any recapture, inherent funding disparities due to the nature of property taxes form, and when states do recapture funds, it can easily lead to adverse effects on the quality of education. In this sense, rather than attempting to achieve perfect equity, PPR simple attempts to achieve the optimal balance between letting wealthier districts maintain the quality of their education while preventing poorer districts from falling far behind.

One main argument against PPR is the adverse effects its implementation has on wealthy school districts. In particular, in any implementation of PPR, the wealthiest districts of a given state will face funding cuts to education, and depending on the existing disparity between poor and rich districts, these cuts could be severe. Since teacher salaries make up the majority of most education budgets, this will likely mean that teachers will see pay cuts, and various nonessential school functions like clubs and after-school programs become at risk of cancellation. This argument, however, is countered by the fact that education funding is a dynamic system. Since PPR ensures that districts are guaranteed to see a portion of funds they raise, when a wealthy district sees that it is at risk of losing, say, $1,000 of funding per student, it can simply raise tax levels to stifle this loss. Since wealthy parents are often quite willing to raise money to ensure that their children's education is up to standard, such a raise is unlikely to see much opposition. These tax raises are not only going to bring the

wealthy districts' budgets up, but since some portion gets recaptured, the resulting raises end up bringing more funding to poorer districts in the state.

Another argument against PPR is that because states with foundation budget models already ensure that poorer districts are given a minimum level of funding necessary to educate their students, there is no need to take money away from wealthy districts when students in poorer districts are already receiving a satisfactory education. This argument, however, misses the purpose of PPR. PPR seeks not to equip every student with a reasonable education, but rather it seeks to eliminate disparities in education. Even if every student of a state is receiving a quality education, as long as wealthy students are receiving better educations, those students are better equipped for financial success in life, ultimately perpetuating the cycle of wealth inequality.

Progressive Partial Recapture in Massachusetts

As mentioned earlier, Massachusetts employs a foundation budget model for funding its public schools. This, however, is a relatively recent development. Prior to 1993, Massachusetts public schools were funded almost entirely through local property taxes, and consequently, there were tremendous funding gaps between rich and poor districts. The case of *McDuffy v. Secretary of the Office of Education,* which appeared before the Massachusetts Supreme Court in 1993, concluded that the state had failed its constitutional obligation to "to provide education in the public schools for the children there enrolled, whether they be rich or poor and without regard to the

fiscal capacity of the community or district in which such children live" (*McDuffy v. Secretary of the Office of Education,* 1993). In response, Massachusetts passed the Education Reform Act of 1993 which instated its current foundation budget system ("Demystifying the Chapter 70 Formula", 2010).

Though the Education Reform Act of 1993 dramatically improved equity in Massachusetts public school funding, the system continued to have glaring issues. Over a decade after the bill's passing, the case *Hancock v. Commissioner of Education* went before the Massachusetts Supreme Court, in which citizens of a few select districts argued that their schools were still at a significant disadvantage and that the state had failed at meeting the obligation it swore to meet in *McDuffy v. Secretary of the Office of Education*. The court ruled that although the funding disparities still existed and the system ideally could use significant improvement, the districts have seen enough change as a result of the Education Reform Act of 1993 that the state was not obligated to continue reforming its education funding policies (*Hancock v. Commissioner of Education,* 2005). Since then, multiple bills have entered the state legislature attempting to make funding more equitable, but nothing has passed (Larkin, 2018).

To see the efficacy of PPR as a potential improvement to Massachusetts' funding system, its principles were simulated on the state's publicly available education funding data. Specifically, the data used is the Massachusetts Department of Education Per-Pupil Expenditures for the fiscal year of 2017. An outline of the procedure used is given in Appendix A.
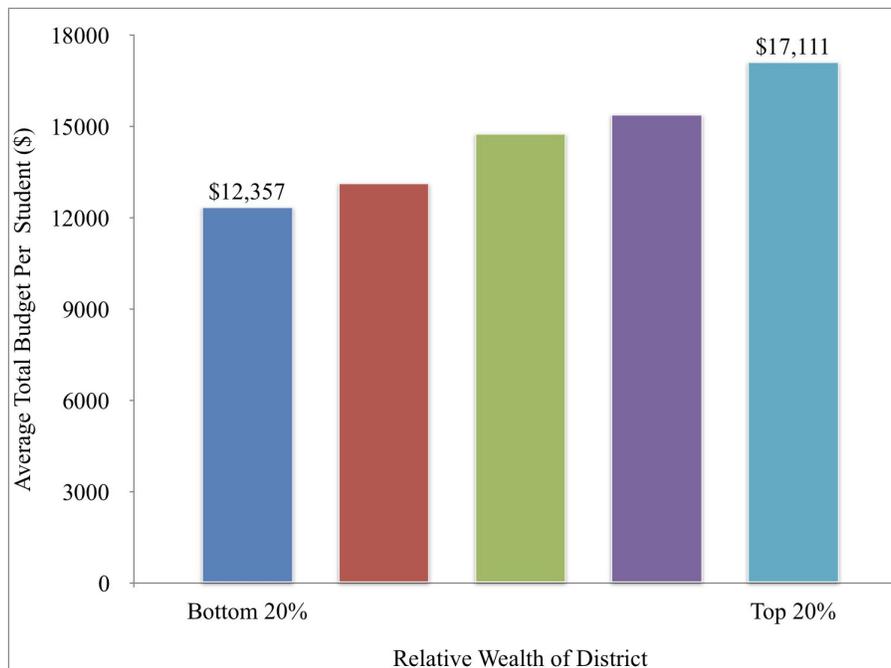
Figure 3: Average Per-Student Funding in MA by Relative Wealth of District before Progressive Partial Recapture
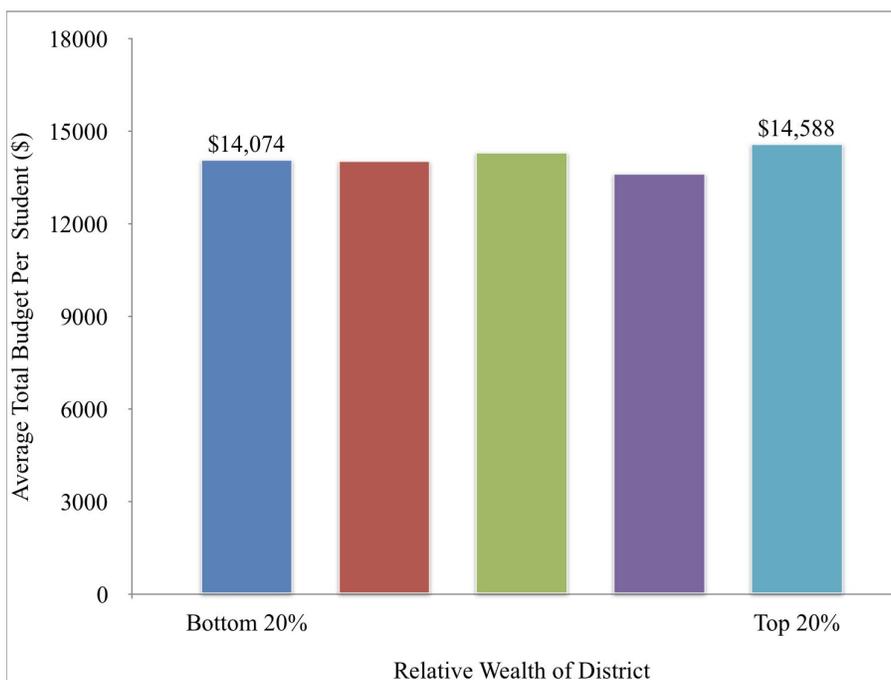

Figure 3: Average Per-Student Funding in MA by Relative Wealth of District after Progressive Partial Recapture

Figures 3 and 4 show the average total per-student budget for education before

and after applying PPR. As seen in figure 3, the current status quo is drastic inequality,

with districts in the bottom 20% of wealth having on average a total of almost $5,000

less per student than districts in the top 20%. After applying PPR, however, this

disparity is neutralized by nearly 90%, with districts in the bottom 20% of wealth now

only having roughly $500 less per student than districts in the top 20%. Additionally,

the average district in the bottom 20% of wealth receives almost $2,000 more

per-student after applying PPR, likely causing a significant boost in quality of

education. This is, of course, still far from perfect. As poorer districts generally require

more funding than wealthier districts to provide the same quality of education, ideally

the schools in the bottom 20% of wealth would be getting significantly more funding

than those in the top 20%. Additionally, these graphs simply show the immediate

effects of switching to a PPR system, but in reality, schools in the wealthiest districts

are unlikely to settle for around $14,500 per student when they previously had around

$17,000 per student, so they are likely to raise taxes in order to increase their budgets.

Due to partial recapture, the resulting raise ensures that every district in the state sees

higher education budgets, which entails higher quality education throughout the state.

Conclusion

Funding for education in public schools across the United States is messy, and

although many decades of debate have gone into how to best fund education, it seems

like no state has truly gotten it right. Many substantial issues stem right from the heart

of funding inequality: property taxes. Although the dependence on property taxes was

once almost abolished in one fell swoop by the supreme court, property taxes still take

a central role in most states' education funding policies, and the inequities that they bring stand prominently in the funding disparities seen across the nation. Because there are so many confounding factors that go into education quality and funding, it would be a lie to claim that any proposed policy will fix all these issues, but a PPR system can offer a start.

Proposing that a parent be forbidden from doing everything in their power to help their children achieve quality education brings the conversation around education funding into a deep, ethical spot. On the one hand, freedom is a foundational value of the United States, and freedom to be as good a parent as one possibly can be is no exception. Some parents work tirelessly their whole life just to be able to give their children better lives, and telling those parents that they cannot give extra money to the cause of education in their district seems like nothing less than a slap in the face. On the other hand, equality stands up there with freedom as a foundational value of the United States, and allowing wealthy districts to raise and keep excess money simply perpetuates the cycle of educational inequality -- there is simply no way around it. PPR serves as a balance, allowing wealthy districts to raise funds for their own children while preventing large disparities in funding from appearing. PPR is a necessary step towards a more equitable school funding system.

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Appendix A: Calculations behind Progressive Partial Recapture

Let d represent a district in Massachusetts. Then, the foundation enrollment of d is denoted $FE(d)$ and roughly represents the number of students in the district. Small districts are generally high outliers in terms of per-student budget numbers due to needing to meet base costs, so districts with total foundation enrollments of less than 200 are ignored. The total required local contribution of d is denoted $RLC(d)$, the total foundation budget of d is denoted $FB(d)$, and the overall total budget, including extra local contributions, is denoted $TB(d)$. Then, the per-student required local contribution, the per-student foundation budget, and the per-student total budgets of d are $RLC(d)/FE(d)$, $FB(d)/FE(d)$, and $TB(d)/FE(d)$ respectively. Additionally, the amount of overflow funds for d is $TB(d) - FB(d)$, and the per-student amount of overflow funds for d is $(TB(d) - FB(d))/FE(d)$ Since the required per-student local contribution of a district is a direct reflection of its financial ability to contribute to education, the quantity $RLC(d)/FE(d)$ is used to rank the districts according to wealth. Let $PW(d)$ denote the percentile of wealth in which the district d lies, with respect to the metric of required local contribution per student.

To achieve PPR, we want the proportion of per-student overflow funds of d that gets recaptured to be directly proportional to the relative wealth of d as measured by $PW(d)$. With a scale system in which the poorest district has no recapture and the wealthiest district has 50% recapture, the percentage of overflow funds of d that gets recaptured is simply $\frac{PW(d)}{100} \times 50 = PW(d)/2$. Thus, if we let $AR(d)$ denote the amount of

recaptured funds for d, then we have $AR(d) = \frac{PW(d)/2}{100}(TB(d) - FB(d))$. All the

recaptured funds then go into a collective pool, which has total value $T = \sum_d AR(d)$,

where the sum runs over all districts d. The hope is now to redistribute this money to

in a way that is inversely proportional to relative wealth. Specifically, if we let $EB(d)$

denote the amount of funds earned back from this pool for a district d, then

$EB(d)/FE(d)$ should be proportional to $100 - PW(d)$. To achieve this, we introduce a

parameter t independent of d such that $EB(d)/FE(d) = t(100 - PW(d))$ for all district.

Since the total amount earned back across all districts necessarily equals to total

amount recaptured, we have $\sum_d EB(d) = T$. Substituting

$EB(d)/FE(d) = t(100 - PW(d))$ into this equation gives $\sum_d t(100 - PW(d))FE(d) = T$, so

in fact we have $t = \dfrac{T}{\sum_d (100 - PW(d))FE(d)}$. Substituting this back tells us precisely the amount

that a given district d earns back from the collective pool:

$$EB(d) = FE(d)\left[\frac{T}{\sum_{d'}(100 - PW(d'))FE(d')}\right].$$ Then, the final total budget for a district d after

applying PPR, denoted $PPR(d)$, is the original total, minus the amount recaptured,

plus the amount earned back: $PPR(d) = TB(d) - AR(d) + EB(d)$, where $AR(d)$ and

$EB(d)$ are calculated as above.