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EDUCATION FREEDOM SAVINGS ACCOUNTS

An Analysis of New Hampshire Senate Bill 193-FN

Presented to the New Hampshire Senate Education Committee

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EXECUTIVE SUMMARY

Education Freedom Savings Accounts, or "EFSAs," are the primary subject of Senate Bill 193-FN. EFSAs would provide financial support to primary and secondary school students in New Hampshire by the state government to help fund students' private school education or homeschooling if that student chooses to leave the public school system. The aim of this legislation is to expand school choice options for New Hampshire families and improve the quality of New Hampshire schools overall by increasing competition. However, this comes at a cost to the state of New Hampshire, as appropriations are not only transferred from districts to families, but the districts are also partially compensated for losses in the form of "additional stabilization grants." The intent of this report is to explore the possible costs of this legislation to the state of New Hampshire and to New Hampshire public school districts by creating a model to calculate these costs. The model employs a range of estimates to establish upper and lower cost estimates of the financial impact.

1. INTRODUCTION

School choice is a philosophy that intends to give students the greatest possible access to different forms of educational opportunities. It can take the form of vouchers, education savings accounts, access to charter schools, and citywide or statewide school choice mechanisms. School choice in New Hampshire has taken the form of Education Savings Accounts which may equalize geographic and demographic disparities in the quality of education by helping less wealthy students attend more expensive private schools or receive a homeschool education. Furthermore, by giving students this choice, they can act as informed consumers and potentially create greater competition in the primary and secondary education markets. Some arguments against vouchers and other programs to facilitate school choice are that they ultimately result in the underfunding of public school districts, teachers losing their jobs and inferior school quality.[1]

According to Senate Bill 193-FN, Education Freedom Savings Accounts would be accessible via grants from state-supported scholarship organizations, transferring state education funding directly to students. These accounts would be universally available and could be used in financing a private or homeschool education.[2] A previous version of the bill failed in the New Hampshire House of Representatives after allegations of economic unviability and the threat to teacher employment. Since then, a revised draft of the bill has been introduced that would give additional stabilization grants to qualifying schools in order to subsidize schools that have lost students.

2. PURPOSE STATEMENT

According to the New Hampshire Constitution, the state must fulfill its obligation to provide an "adequate" education.[3] Although New Hampshire is a small state, there exists a myriad of complexities to this vague dictum. The reliance on property tax as the main form of revenue for the state has resulted in substantial per-pupil disparities between property-rich and property-poor districts. This results in regional differences in New Hampshire, as most property-poor districts are located the northern half of the state, and the property-rich, well-funded districts are in the southern half. In 1997 the Supreme Court's Claremont Decision ruled that funding education solely with a property tax is unconstitutional because of the massive geographic variance in educational funding.[4]

Recently there has been an effort in New Hampshire to allow parents greater flexibility to choose their children's education. The underlying principle is to turn students into customers and allow the competition between schools for the "students' business" to spur quality improvements. This concept was the driving force behind New Hampshire Senate Bill 193-FN, which establishes EFSAs that compensate students for leaving public districts and increase their ability to afford a private school education. However, present analyses of the bill have failed to reach a consensus on the cost of the bill to New Hampshire taxpayers and to New Hampshire public school districts.[5] The following analysis aims to provide a range of estimates of the potential financial impact of SB 193-FN. Generating an estimate requires developing assumptions about the number of students who are eligible for EFSAs, how many students would take advantage of the program, and the precise value of these transfers. By establishing the likely ranges of each of these variables, we intend to create upper and lower estimates of the financial impact on the state budget and public district revenues.

Through this research, we do not hope to pass judgment on SB 193-FN itself. Instead, we seek to investigate the real-world financial impact of this bill if it were implemented in the state of New Hampshire.

3. BACKGROUND INFORMATION

3.1 The New Hampshire Education System

As mentioned above, the New Hampshire Constitution dictates that all children, regardless of school district, have a right to an "adequate education." On its surface, this is a mandate for a certain quality of education, but historically this has necessitated a certain level of funding to meet that level of quality. This mandate has, therefore, been the center of controversy in the New Hampshire educational sphere for many decades. Without a sales or income tax, the state raises revenue primarily through the property tax.[6] Seventy-seven

percent of all revenue is locally sourced, seventy-one percent from local property tax. This has created disparities in education funding in New Hampshire; districts with higher-valued property have greater district revenues and therefore spend more money per pupil compared to property-poor districts. This issue is further exacerbated by the regional concentration of economic development in southern New Hampshire.

In 1997, the Supreme Court case of *Claremont School District v. Governor* found that "the present system of financing elementary and secondary public education in New Hampshire is unconstitutional."[7] In 2006, the New Hampshire Supreme Court further ruled that HB 616 (2005), the current school funding formula, was unconstitutional because the definition of an adequate education was not clearly defined to be used in a funding formula. Directly following this ruling, HB 927 (2007) set forth the state's Minimum Standards for Public Schools. These minimum requirements included resource (input) and performance (output) requirements. Finally, in 2008 the NH legislature passed SB 539, which developed a formula for the distribution of state aid from the Supreme Court's criteria in 2006. The base aid per pupil was divided into two sections, "universal cost," applied to all students, and "differentiated aid," additional funding for at-risk students and special populations. Quality is therefore legally proportional to student performance and aid is proportional to a district's student enrollment.[8]

In FY 2009, districts with lower property values received on average $4,901, which was over nine times the grant value to districts with higher-property values.[9] From 2016 to 2017, the average amount of state funding was roughly $4,476 per pupil, while the Department of Education reported that the average total cost, including federal and local funding, was $15,310.[10] Controversy still remains over whether all students are provided with adequate education, as large variations of per pupil education expenditures remain between property-rich and property-poor districts.

3.2 Educational Opportunities in New Hampshire

As of 2014, the state of New Hampshire had 453 traditional public schools for students in grades K-12. Although the state is comprised of many small towns, most municipalities maintain their own public school. At the same time, there were 176 public school districts in the state educating 176,685 students.[11] In 2014, the largest of these schools had an enrollment of 1,809 (Nashua South High School) and the smallest had an enrollment of sixteen (Errol Consolidated Elementary). In New Hampshire, there are two public academies and one joint maintenance agreement, Coe-Brown Northwood Academy, Pinkerton Academy, and Prospect Mountain High School, respectively. The public academies are both located in the southeast of the state while Prospect Mountain is in Farmington near the Maine-New Hampshire border. Public academies are private, non-profit organizations that are funded by public tuition from multiple neighboring towns. A joint-maintenance agreement is an agreement between two towns to create one school district maintained by both.[12]

Charter schools are independently-operated public schools with charters approved directly by the state. They do not directly report to any school district, allowing for more flexibility in teaching methods and content. According to the National Alliance for Public Charter Schools, there are twenty-six charter schools currently operating in the state of New Hampshire, in which 3,200 students are currently enrolled. The geographic distribution of schools reflects the distribution of the state's population, with a majority of the state's charter schools located in or around the Manchester Metropolitan Area and few in the northern half of the state.[13] Hence, the choice to attend charter schools is a choice not offered directly to many students in less densely populated regions of the state.

The New Hampshire Department of Education notes that 16,852 students are currently attending "non-public" schools. Out of these 141 state-identified private schools (including preschools, special education schools, and postgraduate programs), the most popular programs are high schools and preschools.[14]

Table 1 demonstrates that private schools in New Hampshire charge vastly different amounts of tuition, from less than $2,000 to $62,500, and tuition typically grows much more expensive as the student ages. Furthermore, these schools have student bodies ranging from 4 to 1,074, demonstrating that the means for private schools to expand differ greatly from school to school, and pressure to expand would be substantial if EFSAs are implemented.[15] Finally, private schools in the state are distributed across the state similarly to how charter schools are—with a generally greater focus, however, on the wealthier regions of the state, again creating a market that is more immediately available to students in those parts of the state.[16]

Table 1. Sample of Private Schools in New Hampshire

	Total Number In-State	Average Tuition	Range of Tuition (Min - Max)
Preschool	22	$6,702	$1,520 - $18,500
Elementary School*	39	$8,963	$1,525 - $60,000
High School	31	$27,854	$1,525 - $62,500

The Elementary level includes Middle Schools.
** This data is based on tuition information provided to Private School Review and the sample does not include every private school in New Hampshire.
Source: Private School Review | www.privateschoolreview.com

Another educational option in the state of New Hampshire is homeschooling. As of the 2013-2014 school year, 5,914 children in the state of New Hampshire were participating in homeschooling.[17] The NHHC (New Hampshire Homeschooling Coalition) is the major interest group for homeschoolers, providing resources that outline new legislation in relation to homeschooling, creating a community for homeschoolers across the state and disseminating information. Any information, therefore, of this new bill affecting homeschooling could likely reach a large percent of the homeschooling population quickly and all at once.

Finally, New Hampshire also supports the Virtual Learning Academy Charter School, or VLACS, which is different from other charter schools because it teaches people of all ages, does not require physical attendance at a certain time or place, and has lower variable costs. While VLACS does offer adult-oriented classes, it also operates as a middle and high school. This spring, forty-three students completed some level of middle school and 217 completed some level of high school. With every grade, more students enrolled, a trend that has existed since before the inception of the middle school in 2015, demonstrating that demand for the school is increasing over time. Students who make this choice might turn to ESFAs for further support.

3.3 History of Vouchers and EFSAs in Other States

Six states have so far implemented Education (Freedom) Savings Accounts. Unfortunately for our analysis, four of these states' programs only apply to students with special needs. (Those being North Carolina, Florida, Mississippi, and Tennessee.) Another state with an ESA program, Arizona, originally intended its program to solely apply to students with special needs, but in 2013 expanded its program to include foster children, children in military families, and children in failing school systems.[18] That said, the only state so far to implement an ESA system as comprehensive as SB-193 is Nevada. Nevada does have a provision in its version of the bill that asks scholarship organizations to screen applicants, and as the number of applicants and acceptance rate is undisclosed, it is impossible to know the exact percent participation, but Nevada can serve as an example in other respects. Assuming its median incomes are similar to New Hampshire, participation is below two percent.[19] Secondly, the largest recipient of grants in the state is Calvary Chapel Christian School, wherein over half of its 511 students receive some state aid.[20]

A school voucher system is an educational-choice program that is very similar to EFSA's. A voucher is a certificate of specific worth that is provided by the state and can be spent in order to attend private school. Vouchers less frequently subsidize homeschooling or allow students to attend different public schools districts. Fifteen states and the District of Columbia maintain voucher systems, including the oldest school choice legislation, which was implemented in Vermont in 1869.[21] Lindsay Burke, an education specialist at the Heritage Foundation, in her research on ESFAs and school vouchers has noted that the choice of implementing one system instead of another is often legal: thirty-eight states including New Hampshire have "Blaine Amendment" clauses in their constitutions, making it illegal for any state aid to support religious education, disqualifying voucher systems from supporting students hoping to attend religious schools. In some states such as Arizona, the indirect nature of ESAs have allowed them to support this practice.

3.4 A Summary of 193-FN

New Hampshire Senate Bill 193-FN establishes an intricate transfer system to fund EFSAs and compensate school districts for potential losses. First, students are only eligible to

participate in this program if their family income is below 300 percent of the federal poverty level, or $75,300 for a family of four. These students would receive an EFSA value equivalent to 95 percent of the state's "adequacy aid" to school districts, which is equal to $3,454. The remaining five percent of the state's "adequacy aid" is transferred to the scholarship organization that administered the transfer to cover overhead costs. If the student uses an EFSA to fund a homeschool education, they receive a New Hampshire Department of Education estimated average of $2,762, including differentiated aid top-offs.[22]

EFSAs may be higher than $3,454 because students are granted "differentiated aid" on top of the base value if their family income is below 185 percent of the federal poverty level, the student qualifies for special needs assistance, or both. With maximum differentiated aid, the EFSA transfer value could reach $7,228.

The final major component of SB 193-FN is "stabilization grants" the state pays public school districts to compensate for lost revenue due to EFSAs taken by their students. The bill specifies that all lost revenues are to be reimbursed "in excess of one quarter of one percent."[23]

3.5 A Summary of a Hypothetical EFSA Transfer

For the purposes of Figure 1 below, we are going to be following a hypothetical school district where fifteen students opt to use their education freedom savings accounts and leave their original local public school. In this district, we assume that the "average" EFSA would be roughly $5,000, as others have, but this will be discussed in greater detail in the methodology section.[24] There is a loss of $75,000 dollars (15 x $5,000) of traditional state aid, equal to 0.75 percent of their total budget, which the state reimburses the district $50,000, returning all funds lost beyond 0.25 percent.

Figure 1. A Hypothetical EFSA Transfer

15 Students Leave the Public District and Take EFSAs

Value of Transfer from District to Students = 15 * $5,000 = $75,000

Value of Transfer From State to District = All Lost Revenue - 0.25% = $50,000

District Budget = $10,000,000
Revenue Lost= 0.75% of Budget
Revenue Lost after State Grant = 0.25% of Budget
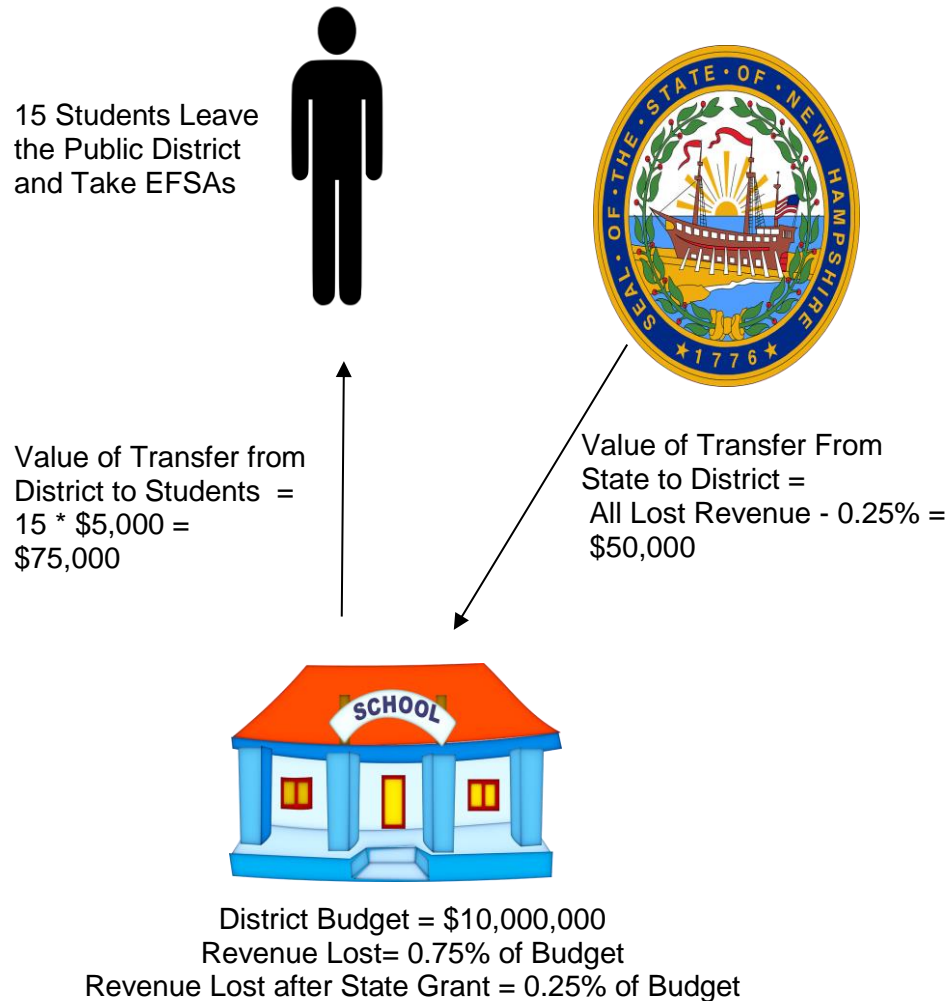
Therefore, in this hypothetical, 15 students taking EFSAs creates a net cost of $50,000 to the state of New Hampshire and a net loss of $25,000 of revenue for the school district, assuming the district makes no cuts to their variable costs when 15 students leave. It is also possible, in this same situation, that the district would make cuts to their variable costs and experience a net revenue gain because of this program; the extent to which districts might do this will be discussed further in the methodology section.

4. METHODOLOGY

The methodology subsections below address several variables that impact the fiscal cost of EFSAs. Our model to assess the net financial cost incurred by the state is essentially an assessment of financial viability of the bill's "additional stabilization grants." The size of these grants will be dependent on the number of students eligible to receive a grant, the number of eligible students likely to take advantage of this program, the true value of EFSAs and the degree to which these grants vary from student to student. The first subsections of this methodology will concern how to model the cost of this program to the state of New Hampshire. The necessary assumptions made will model these costs by applying specific ranges to these variables to derive upper and lower estimates. The later subsections will apply similar methods to determine the effect of this bill on school district budgets.

4.1 A Model for Cost to the State of New Hampshire

Mathematically, the cost to the state of New Hampshire should equal one quarter of one percent of the sum of public school district budgets, subtracted from the total value of all EFSAs, if the 0.25 percent threshold is met. The following model utilizes this basic principle, while its intricacies recognize that students will receive different EFSA amounts depending on their family's income level, whether they use the EFSA to attend a private or homeschool and whether they have a disability that must be accommodated. This model can also be applied to individual district losses based on their budget alone, but summing all these costs together will yield the total cost to the state:

Figure 2. Modeling Cost to the State

The Net Cost to the State of New Hampshire =

Total Value of EFSAs Taken Students - (.0025 * Sum of District Budgets)

In greater detail:

The Net Cost to the State of New Hampshire =

[The Pool of Students Eligible for an EFSA * Program Participation * The Average EFSA Value (Including Differentiated Aid)]

- (.0025 * Sum of District Budgets)

In even greater detail:

<u>The Net Cost to the State of New Hampshire =</u>

{[Number of non-special needs Students Utilizing EFSAs below 185% of poverty level * (Base EFSA Value + Value of Differentiated Aid for below 185% level)]
+

[Number of Students Utilizing EFSAs with special needs and below 185% of the poverty level * (Base EFSA Value + Value of Differentiated Aid for special needs students specifically + Value of Differentiated aid for below 185% level)]
+

[Number of Students Utilizing EFSAs with special needs and above 185% of the poverty level * (Base EFSA Value + Value of Differentiated Aid for special needs students specifically)]
+

[(Number of non-special needs Students Utilizing EFSAs below 300% of poverty level - Number of non-special needs Students Utilizing EFSAs below 185% of poverty level) * Base EFSA Value]

(Number of Homeschooled Students Utilizing EFSAs * Base Homeschool EFSA Value) }

- (.0025 * Sum of District Budgets)

The following sections will describe our rationale for applying ranges to each variable of this equation which is not objectively calculable. It is essential that researchers consult sources which span the ideological continuum so that any claims of a skewed or biased model can be effectively addressed. This may mean using a range of values where the estimate of partisan sources from one perspective on this issue constitute an upper estimate, and the predictions of partisan sources from the opposite perspective constitute a lower estimate. Additionally, some parameters require prediction and will be impossible to pinpoint. Centering estimations on observed outcomes in other states will be helpful, but a range of values will be used to present all possible scenarios. Thus, we will present several estimates based on plausible scenarios of eligibility, utilization, and transfer amount.

4.2 Eligibility for an EFSA

A crucial input for our model is to assess the size of the eligible pool of EFSA participants and whether this pool will increase or decrease in size over the next five years, the timeline of the proposed legislation. The eligible pool of students, multiplied by program

participation rate, will provide estimates of the number of students using EFSAs at various quantities of transfer (the red variables in the equation above). The language of 193-FN indicates that a student is eligible for an EFSA if he or she attends a New Hampshire public or charter school, satisfies basic academic standards and either has a family income below 300 percent of the federal poverty line or attends a school that fails to demonstrate it provides an "adequate" education (pursuant to RSA 193-E:3-b).[25]

Preliminary analysis indicates that the eligible pool of students will likely be over half of all New Hampshire public school students. Three hundred percent of the poverty line is $73,800 for a family of four and the median family income was $70,936 for New Hampshire in 2016.[26] However, using this as a general estimate of the eligible pool is imperfect because family incomes are not evenly distributed among different family types. It is likely, for example, that families with older children have higher incomes, as the parents are farther along in their careers, and families with younger children have lower incomes. It is also more likely a younger student would take advantage of an EFSA than an older student because elementary-level private school tuitions in New Hampshire are much more affordable than their high school-level counterparts, and families with primary-school aged children generally will make less than those with adult children, but it is difficult to precisely calculate the difference.[27]

Analysis conducted by the New Hampshire Senate's Office of the Legislative Budget Assistant declines to estimate this value and considers it "not possible to determine."[28] Reaching Higher NH, an advocacy group, produced what they consider the lowest possible estimate of eligibility, utilizing the pool of students whose family incomes are below 185 percent of the poverty level, as this is publicly available using counts of students on free and reduced price lunch programs. The Henry J. Kaiser Family Foundation's estimates based off figures found in the 2010 census found that 46 percent of New Hampshire residents fall below 300 percent of the poverty line. The Josiah Bartlett Center for Public Policy utilized 50 percent as a rough estimate of eligibility in their analysis of this program.[29]

Our low-end estimate of the number of students who would qualify will match the number of students on free and reduced-price lunch, 185 percent of the federal poverty level. An appropriate high-end estimate will be roughly fifty-six percent of the student body, which sits above forty-six percent of the student body to account for the skewed incomes of parents with young children compared to older children and the rare New Hampshire schools that fail to provide an "adequate education," granting eligibility regardless of the family income level of its students.

4.3 Utilization of EFSAs

One way to estimate likely utilization rates for EFSAs is to examine already implemented programs similar to Senate Bill 193-FN in other states. The New Hampshire Department of Education's estimate of program participation, noted in the EFSA bill, is one percent.

The Department cites national voucher use averages to create this rough estimate. Implementing the EFSA program in New Hampshire, however, may not be analogous to a typical voucher system.

It is likely that over one percent of New Hampshire students will participate in this program because over one percent have already applied to participate in an analogous program. More than 1,800 New Hampshire K-12 students (over one percent of the total) applied to a scholarship program run by the Children's Scholarship Fund, offering a voucher to attend private schools.[30] Considering that this nonprofit program attracted the interest of more than one percent of public school students, and a state-run program would have much more visibility, it is reasonable to consider one percent utilization the lowest possible estimate of program utilization. Surveys of participation in other states and observations of interest in New Hampshire have led many analysts to range their estimate of participation from one to five percent, which seems to be an appropriate high-end estimate as well.[31]

4.4 EFSA Transfer Value and Variance by Type of Student

The dollar-value of EFSAs for different types of students is a more straightforward. The value of an EFSA granted to a student is dependent on whether the student's family income is below 185 percent of the federal poverty level or only below 300 percent, whether the student qualifies as having special needs and whether the student enters a private school with their EFSA or is homeschooled.

The base EFSA value (a blue variable in the above equation), is 95 percent of the state's per-pupil "adequacy" funding to school districts. For the 2017-2018 school year, "adequacy aid" was $3,636 per pupil, making the base EFSA value $3,454, or 95 percent of this value.[32] The last five percent is not state savings but is transferred to the scholarship organization that facilitates these transfers to cover administrative expenses. However, students may receive greater than this value if their family income is below 185 percent of the federal poverty level or have a special need that must be accommodated, as is reflected in Table 2.

Table 2. EFSA Transfer Values by Student

	Value of EFSA
185% to 300% of the Federal Poverty Level	$3,454
Below 185% of the Federal Poverty Level	$5,272
Special Needs	$5,410
Below 185% of the FPL AND Special Needs	$7,228
Homeschool Student	$2,762

Source: EdChoice | www.edchoice.org

The bonuses provided on top of the base EFSA value are called "differentiated aid" by SB 193-FN. A student with family income below 185 percent of the federal poverty level receives an extra $1,818 in differentiated aid. Those with a demonstrated special need

receive an additional $1,956, and those with a special need and a low-income can receive both forms of differentiated aid summed together.[33] While these numbers are definitive, the reason we need a range of estimates for the "average" EFSA level is because it is extremely difficult to estimate the number of students in each category that will utilize an EFSA.

There is no way to determine, for example, whether the proportion of special needs students that seek an EFSA will match the proportion of special needs students currently in public schools. In fact, it is likely that many special needs students will elect to stay in the public system because special needs students forfeit the right to IDEA funding if they enter a private school. While a student whose potential EFSA surpasses their IDEA funding may be inclined to take an EFSA, it can sometimes cost upwards of $100,000 to support a student that needs substantial support and assistance, which the state covers in its entirety. In 2015, for example, this may be why 25,291 students with special needs were educated in public schools, and only 180 in private schools, a level of 0.7 percent.[34] As a lowest-possible estimate of the "average" EFSA value, we plan to use $3,500, which assumes that most students on EFSAs will receive the base amount or will be homeschooled. Our highest-possible estimate will be $5,500, which assumes that many students on free and reduced-price lunch and with special needs will utilize this program and not many will choose a homeschool education.

4.5 A Model for Public District Budgets

The methodology preceding this section primarily serves to estimate the net cost to the state of New Hampshire if EFSAs are implemented. The following sections will approximate the possible costs, or savings, to New Hampshire school districts under the same conditions. First, if we hold school district budgets constant, the cost of this program to each district will likely be 0.25 percent of their total operating budget. This is because the "additional stabilization grants" paid by the state would cover all losses beyond this point. It is also likely that almost every district will surpass this level of lost funding assuming even a one percent program participation rate.

Some advocacy groups have argued that this system would ultimately result in net savings for school districts.[35] The argument follows that if districts lose, for example, two percent of their students, they will have the ability to cut two percent of their total variable costs, a greater gross savings than 0.25 percent of their total operating budget, resulting in net savings. To evaluate the validity of this argument, however, requires an assessment of what a school's "fixed" costs are, and whether these costs are truly fixed. For example, EdChoice's analysis of district budgets classifies "instruction, Student Support Services and Instruction Support Services" as fully variable and flexible, while keeping "capital, debt services, administration, food and transportation" fixed.[36]

It will be difficult to approximate a school's true ability to cut variable costs, likely by firing teachers, while still trying to preserve the quality of the school. For example, fewer

teachers naturally indicates a reduction in the diversity of faculty expertise. If a school has one teacher most-suited to teach an American History course and one teacher most-suited to teach a European History course, they could need to consolidate and offer both classes taught by one of the instructors, who has less knowledge of the other topic. EFSAs could potentially result in savings for school districts if they cut a proportion of variable costs equal to the proportion of students who leave the district, and this must be quantitatively assessed. However, the analysis must maintain that even if this were to happen, it could come at the cost of school quality.

Therefore, the change in variable costs to school districts will be a variable in our analysis that ranges from zero change to a change equal to the proportion of students that took EFSAs. We will calculate the net change to school district budgets at a variety of levels within this range, and vary the assumptions made regarding program participation to create upper and lower estimates.

Figure 3. Modeling Net Change to School District Budgets

Net Change to School District Budgets =

Change in Variable Costs of School Districts - Total Reduction in State Aid

WHEN Total Reduction in State Aid = 0.0025 * Total District Budgets

To approximate a range of the change in districts' variable costs, we will utilize a methodology comparable to that used to calculate the cost to the state in Figure 2. The lowest possible estimate of change in variable costs, as stated, will be zero. This assumes that even if, for example, three percent of students participate and take EFSAs, the school will keep all of its teachers and staff members, incurring a loss equal to what the state fails to compensate it for with "stabilization grants," 0.25 percent of its budget.

The upper estimate of change to variable costs will be proportionate to the maximum expected percentage of students that may leave the district. Utilizing the upper-estimates in prior sections, we expect this to be a five percent participation rate within a pool of eligible students equal to 60 percent of the total student population. Five percent of 60 percent is three percent of the total population. Therefore, the maximum potential change in districts' variable costs will be three percent. Note that this does not signify three percent savings to the total district budget, only to the portion of the budget that is classified as "variable." Regardless, this will likely result in an upper-estimate that constitutes net savings for New Hampshire school districts.

4.6 Public School District Variable Costs

The final variable that must be considered before making this calculation is the percentage of district costs that are truly "variable," or can be flexibly cut in response to a decrease in

student enrollment. Estimates of this value vary tremendously in prior analyses. For example, EdChoice, which supports implementation of this bill, estimates that all teachers and support staff (except for administrative staff) are fully flexible and can be terminated in proportion to the number of students that leave the district. This estimate places the variable costs of New Hampshire school districts at 66 percent.

The Senate Office of the Legislative Budget Assistant, in its bipartisan analysis of the bill, recognizes that other states place estimates of variable costs at 65 to 70 percent, but this estimate fails to recognize that "many small schools would likely have high per pupil fixed costs" compared to larger schools in larger states, so their estimate of New Hampshire variable education costs is 30 percent.[37] This seems somewhat suspect, however, because no specific rationale is offered and the US Department of Education data places fixed costs at a range roughly in between these estimates (depending on what is defined as "fixed"), at roughly 40 to 50 percent.[38]

Therefore, our upper-estimate of variable costs will be 66 percent of districts' total costs, and our lowest possible estimate will be 30 percent. School districts will likely experience a net revenue gain, in terms of Figure 3, at both of these levels, assuming that the cut to variable costs will be proportionate to the percentage of students that leave the district. We also intend to estimate the effect on district budgets if the decrease in variable costs is, for example, proportional to only 50 percent of the percentage decrease in student enrollment rather than 100 percent, and other numbers within this range.

5. CALCULATIONS

5.1 Calculating the Cost to the State of New Hampshire

The following calculations of estimated cost to the state are made using the model described in Figure 2 and the estimate ranges discussed in the methodology section. To summarize briefly, the upper estimate utilizes the maximum of all projected variables, which include an eligible population of 106,997 students, five percent program participation and an average EFSA value of $5,500. The lower estimate assumes 51,715 eligible students, 1 percent program participation and an average grant value of $3,500 to each student. Our "best guess" estimate assumes 50 percent of all students are eligible for the program, or 89,164, 3 percent of eligible students participate in the program, and the average EFSA value is $5,500. These numbers are centered on the majority of estimates made by outside organizations evaluating the proposal. These values, subtracted from 0.25 percent of district budgets, constitute state expenditures each year on additional stabilization grants, as dictated by this bill.

Figure 4. State Expenditures on Additional Stabilization Grants per Year

The Net Cost to the State of New Hampshire =

[The Pool of Students Eligible for an EFSA * Program Participation * The Average EFSA Value (Including Differentiated Aid)] - (.0025 * Sum of District Budgets)

Upper Estimate: (0.6 * 178328) * (0.05) * (5500) - (0.0025 * 3,096,374,548) =

$$29,424,000 - 7,741,000 = \$21,683,000 \text{ per year}$$

$$\text{Total EFSAs} = 29,424,120 * 0.95 = \$27,953,000 \text{ per year}$$

Lower Estimate: (0.29 * 178328) * (0.01) * (3500) - (0.0025 * 3,096,374,548) =

$$1,810,000 < 7,741,000 = \text{Between Zero and } \$1,810,000 \text{ per year}$$

$$\text{Total EFSAs} = 1,810,000 * 0.95 = \$1,720,000 \text{ per year}$$

Best Guess Estimate: (0.5 *178328) * (0.03) * (5000) - (0.0025 * 3,096,374,548) =

$$13,374,600 - 7,741,000 = \$5,634,000 \text{ per year}$$

$$\text{Total EFSAs} = 13,374,600 * 0.95 = \$12,706,000 \text{ per year}$$

The upper estimate suggests that the state will spend $21,683,000 per year subsidizing losses to district budgets with "additional stabilization grants". The total value of EFSAs taken by students will be $27,953,000 per year, or 95 percent of the reduction in state aid to districts before additional stabilization grants. The initial net loss to school district budgets will be $7,741,000 equal to 1/4 of 1 percent of the sum of all district budgets. This is then subject to change if the district can cut variable costs in response to a smaller student body (discussed in the following section).

The lower estimate suggests that this program will pose no or little cost to the state because the value of EFSAs taken, $1,720,000, will be less than one-quarter of one percent of school district budgets. Theoretically, if this were the case in our model, additional stabilization grants would not kick in. In practice, however, even if the value of EFSAs students chose to take was this low, the cost to the state would likely not be zero. Realistically, the $1,810,000 of lost state aid would be concentrated in the state's poorer

districts where there are more low-income students, and the losses to the budgets of these states would likely rise above one-quarter of one percent of the district budget. In these cases, additional stabilization grants would kick in and the cost to the state would be greater than zero and less than $1,810,000 per year. Furthermore, the losses to school districts would be roughly the same value but if students taking EFSAs are concentrated in only a few districts. In this case, once the 0.25 percent mark is reached in these districts the rest of the losses are reimbursed by the state's additional stabilization grants.

The best guess estimate suggests that the net loss to the state of New Hampshire as a result of this program will be $5,634,000 per year. The total reduction in state aid will be $13,374,600 per year as a result of this program, which presents an excess of $5,634,000 above 1/4 of one percent of state budgets. Therefore, the value of EFSAs taken will be $12,706,000 per year, the value of additional stabilization grants will be $5,634,000 per year, and the net loss to school district budgets will be $7,741,000 unless districts make cuts to their variable costs, discussed in the section below.

5.2 Calculating the Changes to School District Budgets

The changes to school district budgets as a result of this program are highly dependent on districts' abilities to cut variable costs (such as teachers, programs, and textbooks) when a specific number of students take EFSAs and leave the district. While a school may lose $40,000 in funding, for example, when 15 students leave the district, a smaller population could give the school the ability to terminate one teacher. If this teacher was paid $50,000 example, the school would experience a positive change of $10,000 to their budget. This notably comes at a cost to faculty diversity and carries negative externalities that cannot be represented by an equation, but this model estimates the likely changes to district budgets if EFSAs were to be implemented.

This model relies on several assumptions of school districts' variable costs, which are difficult to estimate. It employs the equation described in Figure 3. The upper estimate assumes that 66 percent of schools' total costs are variable, or capable of being cut, and the school will cut 3 percent of its costs as 3 percent of its students leave. In the previous upper estimate, 60 percent of students were eligible for EFSAs and 5 percent of eligible students would participate, resulting in this general approximation of 3 percent total participation (0.60 * 0.05 = 0.03). The lower estimate assumes, however, that school districts make no cuts to their variable costs as students leave, either because doing so is not realistic or the district resists making cuts in fear of decreasing school quality for other students.

The best guess estimate of a New Hampshire school's variable costs is 48 percent of the total because it is a midpoint between the upper estimate of 66 percent and the lower estimate of 30 percent. The percentage of variable costs cut is 0.75 percent because utilizing the best guess values form Figure 4 indicates 1.5 percent of all students will leave, and this value is cut in half to account for the likelihood that districts will likely neither cut variable

costs fully proportionate to the number of students that leave, nor are they likely to cut none at all.

Figure 5. Projected Changes to School District Budgets

Net Change to School District Budgets =

Total Variable Costs of District * Percentage of Variable Costs Cut - Total Reduction in State Aid

Upper Estimate: (3,096,374,548 * 0.66 * 0.03) - 7,740,936 =

$$61,308,216.05 - 7,740,936 = \$53,567,000 \text{ per year}$$

Lower Estimate: 0 - 7,740,936 = - $7,741,000 per year

Best Guess: (3,096,374,548 * 0.48 * 0.0075) - 7,740,936 =

$$11,146,948.37 - 7,740,936 = \$3,406,000 \text{ per year}$$

The lower estimate assumes that school districts will make no cuts to variable costs when students leave, so net losses remain at one-quarter of one percent of total budgets, or $7,741,000.

The upper estimate assumes that three percent of a districts variable costs will be cut because it relies on the upper estimates from the previous section: if 60 percent of students are eligible for this program and five percent of those students participate in the program, 3 percent of all students leave because 0.60 * 0.05 = 0.03. The upper estimate further assumes that when 3 percent of students leave a school district, that district is able to cut three percent of its variable costs, including teachers, supplies, etc., that these students would have used if still enrolled. It then assumes that 66 percent of district costs are "variable", the upper estimate of how much outside groups and internal analyses believe are truly variable in a district. This estimate ranges from 66 to 30 percent. Given these conditions, school districts will save a total of $53,567,000 per year.

The best guess estimate tries to strike a middle ground between these two vastly different scenarios. It first assumes that a district will not have the capacity to cut variable costs proportionate to the percentage of students leaving the district and will instead only cut 50

percent of the variable costs proportionate to 1.5 percent of students leaving. As described in the earlier best guess estimate, 50 percent eligibility * three percent participation means 1.5 percent of students leaving the district. The value of 48 percent of district costs being variable is a midpoint between the upper and lower estimates of cost variability and is comparable to the New Hampshire Department of Education variable cost estimate of roughly 45 percent. Given these conditions, districts will shave $11,147,000 from their budgets in response to 1.5 percent of students leaving, creating a net savings of $3,406,000 per year to school district budgets across the state of New Hampshire.

5.3 Analysis of Individual Districts

After assessing the total costs to all New Hampshire school districts, it is helpful to gain perspective by focusing on individual districts. This section will focus on Hampton, one of New Hampshire's wealthy districts, and Franklin, a New Hampshire school district with far less funding per pupil than Hampton.

Both schools have similar enrollments. Franklin is composed of 1,039 students and Hampton enrolls 1,111. However, the budgets of both districts vary substantially as measured by 2017 appropriations: Franklin's 2017 budget was $16,840,308, compared to $47,495,939 in Hampton. Thus, Franklin operates with $16,208 per pupil and Hampton operates with $42,750 per pupil. Income disparities of students within the district are represented by the number eligible for Free and Reduced-Price Lunch: 58.73 percent of students are eligible for the program in Franklin, and only 18.08 percent of students are eligible in Hampton.

5.3.1 Projections for Franklin School District

To estimate the initial lost funding in Franklin, Figures 2 and 3 can be applied at the district-level. The total number of students in Franklin, 1,039. The total number of eligible students is more difficult to ascertain. According to district reports, 58.73 percent of Hampton students are below 300 percent of the poverty line because they are eligible for Free and Reduced-Price lunch, meaning they are below 185 percent of the poverty line. The true value of eligible students could be upwards of 70, 80 or 90 percent, but to refrain from making an arbitrary upper estimate of this value, we will use solely this conservative estimate of 58.73 percent eligibility. Program participation and EFSA value will maintain the same values for upper and lower estimates, but it is far more likely that program participation is closer to five percent than one percent in Franklin because lower levels of funding per student may make students more inclined to leave. This will be reflected in the best guess estimate of program participation, which will move one quartile from 3 percent, the midpoint of the two estimates, to 4 percent. The sum of all district budgets from Figure 2 is replaced by Franklin's annual budget of $16,840,308.

Figure 6. Projections for Franklin

<u>Change in Budget=</u>

[The Pool of Students Eligible for an EFSA * Program Participation * The Average EFSA Value (Including Differentiated Aid)] - (.0025 * Total District Budget)

<u>Upper Estimate:</u> (1,039 * 0.5873) * (0.05) * (5500) - (0.0025 * 16,840,308)

Net Cost to State in Franklin: 167,806.29 - 42,100.77 = $125,000 per year

Total EFSAs: 167,806.29 * 0.95 = $159,000 per year

Lost appropriations in Franklin = $42,000

<u>Lower Estimate:</u> (1,039 * 0.5873) * (0.01) * (3500)

21,357.16 < (.0025 * Total District Budget) so additional stabilization grants are not paid

Total EFSAs: 21,357 * 0.95 = $20,000 per year

Lost appropriations in Franklin = $21,000

<u>Best Guess Estimate:</u> (1,039 * 0.5873) * (0.04) * (5000) - (0.0025 * 16,840,308)

Net Cost to State in Franklin: 122,040.94 - 42,100.77 = $80,000 per year

Total EFSAs = 122,040.94 * 0.95 = $12,706,000 per year

Lost appropriations in Franklin = $42,000

<u>Change to District Budget =</u>

Total Variable Costs of District * Percentage of Variable Costs Cut - Total Reduction in State Aid

20

Upper Estimate: (16,840,308 * 0.66 * 0.029) - 42,100.77 =

322,323.50 - 42,100.77 = $280,000 per year

Lower Estimate: 0 - 42,100.77 = - $42,000 per year

Best Guess: (16,840,308 * 0.66 * 0.0075) - 42,100.77 =

83,359.52 - 42,100.77 = $41,000 per year

Essentially, Figure 6 estimates the effects on the Franklin School District if a number between 30 students (the upper estimate) and six students (the lower estimate) take EFSAs. In the case of the upper estimate and best guess estimate, the school loses $42,000 in appropriations before it makes any cuts, equivalent to one-quarter of one percent of its total budget. In the case of the lower estimate, the school receives $21,000 less in appropriations.

Next, in a world in which Franklin could make cuts equivalent to the proportion of students it loses, as some experts suggest, it could cut $322,000 in spending when 30 students leave and save $280,000 per year as a result of this program. If no cuts are made, the lower estimate, the school operates with $42,000 less that year. The best guess estimate, utilizing crude midpoints between ranges of estimates (as discussed in the previous section), indicates that the school could save $83,000 if EFSA takers leave and generate $41,000 more in appropriations per year. If 20 students leave, for example, the school could potentially fire one teacher paid $60,000, spend $20,000 less on food, textbooks, programs and amenities and have greater appropriations per year as a result of this bill than before.

5.3.2 Projections for Hampton School District

The same method will now be applied to the wealthier Hampton school district, with 1,111 students, a budget of $47,495,939, and 18.08 percent of students on Free and Reduced-Price Lunch.

Figure 7. Projections for Hampton

Change in Budget=

[The Pool of Students Eligible for an EFSA * Program Participation * The Average EFSA Value (Including Differentiated Aid)] - (.0025 * Total District Budget)

Upper Estimate: (1,111 * 0.1808) * (0.05) * (5500) - (0.0025 * 47,495,939)

Cost to State in Hampton: 55,238.92 < 118,739.85, so no additional stabilization grants

Total EFSAs: 55,238.92 * 0.95 = $52,000 per year

Lost appropriations in Hampton = $55,000 per year

Lower Estimate: (1,111 * 0.1808) * (0.01) * (3500)

7,030.41 < 118,739.85 so no additional stabilization grants

Total EFSAs: 7,030.41 * 0.95 = $7,000 per year

Lost appropriations in Hampton = $7,000 per year

Best Guess Estimate: (1,111 * 0.1808) * (0.02) * (5000) - (0.0025 * 47,495,939)

Cost to State in Hampton: 20,086.88 < 118,739.85, so no additional stabilization grants

Total EFSAs = 20,086.88* 0.95 = $19,000 per year

Lost appropriations in Hampton = $20,000 per year

Change to District Budget =

Total Variable Costs of District * Percentage of Variable Costs Cut - Total Reduction in State Aid

Upper Estimate: (47,495,939 * 0.66 * 0.00904) - 55,238.92 =

283,379.77 - 55,238.92 = $228,000 per year

Lower Estimate: 0 - $7,030.41 = - $7,000 per year

Best Guess: (47,495,939 * 0.66 * 0.00226) - 20,086.88 =

$$70{,}844.94 - 20{,}086.88 = \$51{,}000 \text{ per year}$$

The differences are stark for the Hampton school district compared to the Franklin district when an EFSA program is established. Here, the upper estimate constitutes roughly 10 students electing to take an EFSA, while the lower estimate constitutes roughly 1 student. Because far fewer students are eligible for the program in Hampton, the district is far less affected by the program and does not even qualify for additional stabilization grants when the assumptions of the upper estimate are applied. Hampton also stands to gain more because of this program than Franklin because both districts lose the same amount of state funding when a student takes an EFSA, an average of between 3500 and 5500 per student, but Hampton operates with \$42,750 per pupil and could be able to cut variable costs more easily when a student takes an EFSA than Franklin, the poorer district.

Hampton stands to lose, at most, 0.116 percent of their funding if this program is implemented before cuts are made in response to the students' departure. Franklin could lose upwards of 0.25 percent of their funding if the program were implemented, more than double Hampton, and would need to think more seriously about cutting spending.

6. CONCLUSION

The two models presented establish upper and lower estimates of the financial impact of this bill to the state of New Hampshire and to New Hampshire public school districts. Though exact fiscal impacts of the bill are difficult to determine, by establishing ranges of all imprecise variables and testing a variety of combinations and values within these ranges, we hope to roughly estimate the program's potential impact.

We calculate the upper estimate of the net cost to New Hampshire to be \$21,683,000 per year, the lowest possible estimate of this same value to be \$1,720,000 per year, and the "best guess" estimate to be \$5,634,000 per year. Our upper estimate of the change in school district budgets, per year, expressed as a sum across all New Hampshire districts, is a positive change of \$53,567,000, and the lower estimate is a loss of revenue of \$7,741,000. The "best guess" estimate is a positive change of \$3,406,000 across all districts. We then highlight that these changes in revenue will vary drastically across districts. In the property-poor district of Hamilton, the negative net change to the budget could be as low as 42,000 per year, while in the property-rich district of Franklin, the positive net change to the budget could be as high as 228,000 per year. Ultimately, the financial impact of the bill is a single factor to consider in an assessment of its total impact, along with the non-monetary costs and benefits of offering EFSAs to New Hampshire students.

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