Schools, Taxes and the New York Economy:

An Economic Analysis of a Balanced Budget Alternative to the Governor's School Aid Cuts

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Background

New York State tax revenues have declined precipitously over the last several years. Rather than growing at a rate that approximates the rate of growth in state spending, state revenues are declining absolutely. The result is a substantial gap between projected revenues and the projected budget baseline as estimated by the New York State Division of the Budget. In the Executive Budget that the Governor released on January 29, 2003, he estimated that for the state government's 2003-2004 fiscal year, revenues would fall $9.3 billion short of the projected expenditure baseline.

For the 2002-2003 fiscal year, which ended a little more than three weeks ago, revenues were well below the levels that had been projected during last year's budget negotiations. The Governor had projected that the state deal with this additional 2002-2003 shortfall by borrowing against the proceeds from the tobacco manufacturer Master Settlement Agreement. In the absence of an agreement of this proposal or on any of the alternate borrowing plans advanced by others, the state balanced its books for 2002-2003 by temporarily delaying $1.9 billion in scheduled payments. When combined with the previously projected shortfall of $9.3 billion for 2003-2004, the state is facing an $11+ billion budget gap. In late January, the Governor had estimated this 15-month gap at $11.5 billion.

As indicated above, the $9.3 billion gap is the difference between the revenue that the Budget Division estimates that the state will receive under current law and its estimate of baseline expenditures. The calculation of that budget baseline is not a well-defined or a well-understood process in New York State, but it does attempt to calculate the amounts necessary to maintain major programs at their current service levels. For state aid to education, for example, the Budget Division includes a year-to-year increase of $600 million in his estimate of baseline expenditures.

To close the $11.5 budget gap that he was projecting in late January, the Governor proposed a combination of (1) one-shots such as the tobacco securitization plan described above ($3.8 billion), the refinancing of outstanding debt ($516 million), and the use of federal Temporary Assistance for Needy Families block grant funds to cover certain expenditures that had traditionally been paid for with state General Fund resources; (2) increased revenues of about $1.3 billion, with about 55% of that total coming from fee increases and the remaining 45% coming from tax increases including insurance tax increases and the elimination of the state's relatively new exemption, from the sales tax, of items of clothing and footwear costing less than $110; and (3) approximately $5.235 billion in what the Executive Budget documents referred to as "spending restraint," "savings," and "cost containment."

While some of the $5.235 billion in projected spending reductions are undoubtedly attributable to actions that could fairly be described in such terms, the bulk of these "savings" would require real cuts in real programs and services.

Among the cuts in spending that the Governor has proposed are substantial cuts in state aid to education. The dollar magnitude of the cuts can and are described in a variety of ways for two major reasons. The first involves the difference between (a) New York State's April 1 to March 31 state fiscal year and (b) the July 1 to June 30 fiscal year on which all of the state's school

districts operate. The second involves the difference between (a) the level of state aid in the prior school year, and (2) the level of state aid required to maintain the prior school year's level of services during the current school year (i.e., the budget baseline). From both an educational perspective and an economic impact perspective, it is most appropriate to think about the proposed budget cuts on a school year basis. On this basis, the proposed year-to-year cut (from the 2002-2003 school year to the 2003-2004 school year) in state aid to elementary and secondary education is an estimated $1.24 billion. Also on a school year basis, but relative to the Budget Division's baseline rather than to the prior school year, the Executive Budget is recommending a reduction in school aid of approximately $1.84 billion. While the $1.24 billion figure has taken center stage during this year's budget negotiations, the $1.84 billion difference is the relevant measure from both an educational perspective and an economic impact perspective. From an educational perspective, for example, the Educational Conference Board estimated that the state's school districts would require an additional $1.3 billion in resources in the 2003-2004 school year in order to simply maintain the 2002-2003 status quo. If the state were to cover 50% of the cost of maintaining the status quo, state aid would need to increase by about $650 million, which is very similar to the $600 million school aid increase included in the Budget Division's budget baseline.

Choices

In presenting his Executive Budget, Governor Pataki did not argue that his proposed cuts in state aid to education were desirable or appropriate from an educational policy perspective or from an administrative perspective. Rather, he argued that these cuts were necessary because of the state's fiscal situation: "As someone who was educated in New York's public schools -- and as a father whose children have benefitted greatly from our excellent public school system -- the last thing I want to do is reduce spending on education. However, the crisis is that bad. We have no choice."

On what basis did the Governor conclude that we had no choice when it came to cutting state aid to education? In that same budget address, the Governor repeatedly asserted that the state had a clear and simple choice - between taxes and jobs:

> ". . . as I see it, our choices are limited to two. It's a clear choice between taxes and jobs."
>
> " . . .raising taxes this year -- or any year -- is the wrong choice. We must choose jobs."

The problem with the Governor's framing of the state's choices is that it ignores the fact that government spending on needed public services has important and positive economic effects in both the short and long runs. In earlier analyses of the Governor's claims we have shown that the budget balancing strategy being recommended tby the Governor this year is based on inaccurate renditions of New York's economic history. The purpose of this study is to empirically evaluate the basis for the Governor's conclusion that "We have no choice."

In Theory

The Governor attempts to justify his policy choices by asserting a relationship among taxes, government spending and the economy that is inconsistent with basic economic principles, and by presenting a mythical and incorrect rendition of New York State's economic history.

The Governor asserts that tax increases (or some undefined category of job increases that he calls job killing tax increases) should be avoided at all costs. And, by making this argument, while proposing substantial service cuts, he implies that he believes that tax increases generally have a more negative effect on the economy than service cuts. This is not true, and is particularly mistaken during a recession.

The more honest presentation of the dilemma that the state faces is to acknowledge that neither tax increases nor service cuts are desirable during a recession, but that New York, like all of the other states except Vermont, is required to balance its budget in both good times and bad. Thus, the challenge for New York State, at the present time, is that once it reduces the budget gap to "manageable proportions," it must choose among a variety of painful budget balancing actions, none of which would be desirable in an ideal world. In making these hard choices, the Governor and the Legislature should work to close the rest of the gap with the least economically harmful mix of budget balancing actions.

Both tax increases and service cuts can be "job killers." The Governor should want to avoid job killing service cuts as much as he wants to avoid job killing tax increases.

While the federal government can "prime the pump" during a recession by creating or increasing its budget deficits, state and local governments can not. These lower levels of government must in fact cut services and/or increase taxes during a recession, thus counteracting to one degree or another the pump priming that is going on at the federal level where they are increasing spending and cutting taxes.

In their review of the guidance that basic economic principles can provide state policymakers as they work to balance their budgets during the current recession, Joseph Stiglitz, winner of the 2001 Nobel Prize in Economics, and Peter Orszag of the Brookings Institution, show why a temporary increase in the tax on the portions of income over some relatively high level is the least damaging mechanism for balancing state budgets during recessions. Reductions in government spending on goods and services produced or provided locally and reductions in transfer payments to lower-income families are most damaging to the economy since they take dollar for dollar out of the local economy. Moreover, increases in consumption taxes and fees will take more demand out of the economy than tax increases on the tax on the portion of income over some relatively high level. Why? Because as one's income increases, the greater the portion of that income that will be saved or invested rather than spent on goods and services. While there is nothing wrong with saving and investing, in a recession the problem is that demand is down and that is slowing down the economy.

To really evaluate this year's budget alternatives, it is important to recognize that many of the budget cuts being proposed by the Governor are really tax increases. For example, the Governor's proposed cuts in state aid to local school districts will hurt the economy in one or both of the following ways. Cuts in the quality of local educational programs will not only hurt communities'

attractiveness to residents and employers and negatively impact on districts' ability to achieve higher performance standards but they will also reduce employment both directly and indirectly. On the other hand, to the extent that local communities do not want to cut their educational programs, they will have to increase local property taxes more than would otherwise be necessary.

Finally, the Governor's implicit definition of what kinds of taxes are "job-killing" and what kinds are not, seems particularly inconsistent with basic economic principles. Consumption taxes, property taxes, gross receipts taxes and fees will have the most negative impact on the ability of businesses, particularly small businesses, to create and maintain jobs since they make it more difficult to make a profit. Those taxes will also have the most negative effect on low and middle-income households and therefore on aggregate demand. Thus, for the reasons cited by Stiglitz and Orszag, they will place the most drag on the economy during a recession.

In Practice

To assist us in quantifying these theoretical points as they apply to the current budget deliberations here in New York State, we have asked the Institute on Taxation and Economic Policy (ITEP) to use its input-ouput model of the New York State economy to analyze the impact of restoring the Governor's school aid cuts and funding those restorations with a high-end income tax surcharge. This model and its application to school funding are described in detail in Appendix A to this report.

As the following tables indicate, the New York State would be much better off economically if the legislature were able to restore the Governor's proposed cuts in education aid without increasing taxes or cutting other programs, than if it were to go ahead with the Governor's cuts. But that shouldn't come as a surprise to anyone since that is like a free lunch or pennies from heaven. By far the more important conclusion of this analysis, which may surprise the Governor and supporters of his rhetoric regarding tax increases, is that even if the school aid restorations were fully funded by a concomitant and offsetting personal income tax increase, the net economic benefit would be substantial.

Table A summarizes the economic impact of these two alternatives (referred to as Scenario 1 and Scenario 2) relative to the Governor’s proposed school aid cuts. The first scenario compares the Governor’s proposal to the unrealistic “would that it could be true” option of restoring all $1.84 billion of the proposed school aid cuts without increasing taxes or cutting other programs. While unrealistic, this alternative is a useful starting point for our analysis in that it shows in stark terms the economic impact of the Governor’s school aid proposal. The second scenario, a much more realistic and practical alternative, compares the Governor’s proposal to a progressive and fiscally responsible “balanced budget” alternative. This option involves increasing state aid to education by $1.84 billion over the level proposed by the Governor and funding that increase in state aid to elementary and secondary education with a concomitant and offsetting $1.84 billion increase in the state individual income tax. The analysis takes into consideration the direct and indirect effects of school spending on the state's economy and the detailed effects of taxes used to finance school spending, including the effects of the federal deductibility of state income taxes and the fact that a substantial portion of New York State income tax revenues are paid by residents of other states.

It should come as no surprise that Scenario 1, a $1.84 billion increase in state aid to education relative to the Governor's proposal without any increase in taxes or any reduction in other spending, would have a substantial positive effect on the state's economy. After all, it would be increasing school spending by a substantial amount without any offsetting tax increases or spending cuts. As Table A indicates, this scenario would result in an initial net increase of approximately 78.9 thousand jobs over and above the Governor's proposal with that number increasing slightly through the end of the four year period shown. The employment gains include the direct gains in jobs funded through the increased education funding as well as indirect gains from the increased economic activity attributable to the increased education spending. In the long run (see Table B) there is also a substantial increase in employment as a result of the "amenity" effect that higher quality school systems have in attracting people and jobs to a community. In addition to the impact on employment, New York's gross state product (GSP) would be higher by $2.53 billion, in constant 1996 dollar terms, in the first year, and up by $2.86 billion by 2007. Real disposable personal income, that is, income after taxes and inflation, would increase by $1.18 billion 2004 and by $2.37 billion by 2007.

Scenario 2, a $1.84 billion increase in education spending funded by a matching increase in individual income tax, would produce a positive job growth of 58 thousand jobs the first year. By 2007 the number of additional jobs in New York attributable to the funding proposal would be 61 thousand. Gross state product would rise by $1.53 billion in 2004, the first year of enactment, and would be higher by $1.87 billion in 2007, both measured in constant 1996 dollars. Real disposable income in 1996 dollars would be higher by $0.16 billion in 2004 and would rise sharply to $0.65 billion in 2007.

More detail on the impact of these proposals is presented in Tables B, C and D. Table B, summarizes the impact over the next 20 years of Scenario 1 and presents the impact on a number of other variables besides those summarized in table A. As indicated above, the "amenity" effect of strong and attractive school systems results in significant positive impacts over time.

Table C presents the same analysis for Scenario 2. The differences between the Governor's proposal and Scenario 2 is less than the difference between the Governor's proposal and Scenario 1 because of the more realistic assumptions involved in the scenario 2 "balanced budget" alternative - that spending on even the most important public services has to be paid for in one way or another. But as Table C indicates, even after taking the concomitant and offsetting income tax increase into consideration, the impact on the economy is still substantially positive relative to the Governor's proposal.

Table D presents the results of Scenario 2 but without taking the amenity effects of increased educational spending into consideration. Under this analysis, the economic benefits of Scenario 2 relative to the Governor's proposal are still substantial but they do not grow as much over time as when the amenity effects of education are taken into consideration.

Conclusion

Governor Pataki's framing of the choices facing New York in the current budget is one-sided. By

thinking only about the economic impact of tax changes while ignoring the economic impact of what is purchased with the revenues generated by those taxes, the Governor is recommending policies that would not have the greatest positive effect on the state's economy. It is clear, as the Governor himself has acknowledged, that his proposed school aid cuts are not desirable or warranted on educational policy grounds. But as this analysis indicates, those school aid cuts also fail on the criteria that the Governor has selected: their impact on jobs and the economy.

Table A: New York Education Spending and Tax Options

Scenario 1: Eliminate the proposed $1.84 billion reduction in state aid to education* without increasing taxes or cutting other programs.

Economic Impact by School Year Compared to Governor's Proposal

School Year	2004	2005	2006	2007
Employment (in Thousands)	78.87	78.39	78.8	79.8
Gross State Product (in Billions)	$ 2.53	$ 2.64	$ 2.76	$ 2.86
Real Disposable Personal Income (in Billions)	$ 1.81	$ 2.00	$ 2.19	$ 2.37

Scenario 2: Eliminate the proposed $1.84 billion reduction in state aid to education* funded by a $1.84 billion increase in individual income taxes**

Economic Impact by School Year Compared to Governor's Proposal

School Year	2004	2005	2006	2007
Employment (in Thousands)	58.0	58.8	59.7	61.1
Gross State Product (in Billions)	$ 1.53	$ 1.67	$ 1.77	$ 1.87
Real Disposable Personal Income (in Billions)	$ 0.16	$ 0.35	$ 0.50	$ 0.65

Notes

* For the 2003-2004 school year, the Executive Budget is proposing a reduction in state aid to elementary and secondary education of $1.84 billion relative to the Budget Division's baseline. This includes a proposed year-to-year reduction of $1.24 billion.

** The $1.84 billion would be raised by a set of progressive income tax surcharges on the portions of income over $100,000. The average effective federal income tax offset for the affected taxpayers would be an estimated 25.5%

Table B

Scenario 1: Eliminate the proposed $1.84 billion reduction in state aid to education* without increasing taxes or cutting other programs.

Variable	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Employment (Thous)	78.87	78.39	78.8	79.8	80.41	80.93	81.66	82.45	83.37	84.23	84.23	85.19	85.96	86.71	87.35	87.99	88.58	89.2	89.76	90.25
GRP (Bil Chained 96$)	2.456	2.556	2.66	2.752	2.833	2.913	2.997	3.081	3.169	3.26	3.332	3.406	3.476	3.546	3.611	3.675	3.741	3.802	3.863	3.917
GRP (Bil Fixed 96$)	2.527	2.638	2.755	2.862	2.958	3.054	3.156	3.26	3.367	3.479	3.563	3.655	3.743	3.831	3.913	3.995	4.078	4.157	4.235	4.305
Pers Inc (Bil Nom $)	2.461	2.769	3.109	3.431	3.739	4.047	4.367	4.692	5.031	5.379	5.706	6.063	6.423	6.795	7.169	7.552	7.95	8.347	8.753	9.155
PCE-Price Index (Fixed 96$)	0.007813	0.02151	0.02663	0.03008	0.0321	0.03316	0.0336	0.03362	0.03347	0.03321	0.03287	0.03259	0.03226	0.03191	0.0316	0.03108	0.03059	0.02995	0.02921	0.02841
Real Disp Pers Inc (Bil Fixed 96$)	1.812	1.997	2.186	2.365	2.532	2.694	2.859	3.02	3.181	3.341	3.484	3.635	3.78	3.924	4.06	4.194	4.328	4.454	4.577	4.69
Population (Thous)	23.82	44.73	63.35	80.08	95.12	108.7	121	132.1	142.3	151.7	160.1	167.8	174.8	181.2	186.8	191.8	196.2	199.9	203.1	205.8
Econ Migrants	23.56	20.11	17.39	15.09	13.06	11.3	9.788	8.494	7.418	6.445	5.446	4.732	4.024	3.362	2.706	2.088	1.463	0.8912	0.36	-0.1434
Total Migrants	23.56	20.11	17.38	15.08	13.04	11.28	9.77	8.476	7.401	6.431	5.425	4.71	3.999	3.334	2.675	2.055	1.425	0.8514	0.3167	-0.19
Labor Force	17.84	30.19	39.86	47.73	54.17	59.57	64.12	68.02	71.33	74.22	76.61	78.76	80.75	82.61	84.38	86.08	87.76	89.32	90.74	92.01
Demand (Bil Fixed 96$)	4.473	4.617	4.805	4.974	5.123	5.277	5.447	5.623	5.81	6.011	6.161	6.335	6.499	6.666	6.822	6.979	7.139	7.292	7.443	7.578
Output (Bil Fixed 96$)	4.424	4.467	4.533	4.589	4.638	4.695	4.767	4.85	4.941	5.048	5.133	5.238	5.339	5.445	5.547	5.65	5.759	5.865	5.971	6.069

* For the 2003-2004 school year, the Executive Budget is proposing a reduction in state aid to elementary and secondary education of $1.84 billion relative to the Budget Division's baseline. This includes a proposed year-to-year reduction of $1.24 billion.

Table C

Scenario 2: Eliminate the proposed $1.84 billion reduction in state aid to education* funded by a $1.84 billion increase in individual income taxes**

Variable	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Employment (Thous)	58.01	58.82	59.72	61.14	62.07	62.84	63.73	64.65	65.7	66.6	66.6	67.63	68.45	69.23	69.92	70.6	71.21	71.86	72.46	72.99
GRP (Bil Chained 96$)	1.484	1.613	1.712	1.801	1.878	1.951	2.025	2.099	2.176	2.252	2.31	2.376	2.438	2.5	2.557	2.613	2.67	2.724	2.777	2.825
GRP (Bil Fixed 96$)	1.527	1.665	1.774	1.873	1.961	2.046	2.133	2.22	2.312	2.403	2.471	2.55	2.625	2.7	2.771	2.841	2.911	2.978	3.045	3.106
Pers Inc (Bil Nom $)	1.68	1.949	2.223	2.487	2.736	2.982	3.238	3.497	3.77	4.046	4.298	4.587	4.877	5.176	5.478	5.787	6.108	6.431	6.76	7.088
PCE-Price Index (Fixed 96$)	0.006264	0.01255	0.01701	0.02006	0.02207	0.02327	0.02402	0.02436	0.02463	0.02474	0.02469	0.02475	0.02478	0.02473	0.02473	0.02469	0.02443	0.02412	0.02377	0.02336
Real Disp Pers Inc (Bil Fixed 96$)	0.1611	0.3495	0.5035	0.6529	0.7886	0.9195	1.052	1.181	1.313	1.441	1.551	1.675	1.794	1.912	2.024	2.133	2.245	2.35	2.452	2.547
Population (Thous)	16.63	31.72	45.25	57.52	68.64	78.72	87.93	96.36	104.1	111.3	117.8	123.8	129.3	134.3	138.9	142.9	146.5	149.7	152.4	154.7
Econ Migrants	16.45	14.53	12.65	11.1	9.694	8.453	7.393	6.482	5.733	5.037	4.279	3.785	3.28	2.803	2.329	1.877	1.411	0.9855	0.5857	0.2093
Total Migrants	16.45	14.53	12.64	11.09	9.681	8.44	7.38	6.469	5.722	5.027	4.263	3.769	3.262	2.783	2.306	1.852	1.384	0.9563	0.5538	0.1751
Labor Force	11.39	20.55	27.74	33.69	38.61	42.79	46.34	49.41	52.06	54.38	56.31	58.08	59.75	61.3	62.79	64.22	65.66	66.99	68.22	69.33
Demand (Bil Fixed 96$)	1.724	1.976	2.171	2.35	2.504	2.653	2.81	2.969	3.14	3.31	3.435	3.599	3.751	3.903	4.047	4.189	4.333	4.473	4.61	4.735
Output (Bil Fixed 96$)	2.746	2.877	2.966	3.046	3.111	3.177	3.25	3.328	3.417	3.507	3.578	3.673	3.763	3.856	3.945	4.035	4.127	4.218	4.31	4.395

* For the 2003-2004 school year, the Executive Budget is proposing a reduction in state aid to elementary and secondary education of $1.84 billion relative to the Budget Division's baseline. This includes a proposed year-to-year reduction of $1.24 billion.

** The $1.84 billion would be raised by a set of progressive income tax surcharges on the portions of income over $100,000. The average effective federal income tax offset for the affected taxpayers is estimated to be 25.5%.

Table D

Scenario 2-A: Eliminate the proposed $1.84 billion reduction in state aid to education* funded by a $1.84 billion increase in individual income taxes**

Same as Scenario 2 but without educational amenity effects.

Variable	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Employment (Thous)	56.12	55.36	54.83	54.85	54.43	53.89	53.5	53.21	53.12	52.92	51.92	52.12	52.17	52.23	52.28	52.36	52.37	52.48	52.56	52.66
GRP (Bil Chained 96$)	1.375	1.411	1.422	1.425	1.417	1.406	1.397	1.39	1.39	1.389	1.377	1.385	1.392	1.4	1.41	1.421	1.432	1.445	1.458	1.472
GRP (Bil Fixed 96$)	1.415	1.456	1.474	1.482	1.48	1.475	1.471	1.471	1.476	1.482	1.473	1.486	1.499	1.513	1.528	1.544	1.561	1.58	1.599	1.618
Pers Inc (Bil Nom $)	1.525	1.649	1.777	1.891	1.985	2.072	2.16	2.251	2.351	2.45	2.522	2.644	2.766	2.893	3.025	3.163	3.304	3.453	3.607	3.767
PCE-Price Index (Fixed 96$)	0.007004	0.01247	0.01656	0.01951	0.02158	0.02301	0.02403	0.02473	0.02529	0.02571	0.02596	0.02628	0.02658	0.02681	0.02713	0.02728	0.02754	0.0278	0.02795	0.02817
Real Disp Pers Inc (Bil Fixed 96$)	0.03003	0.1028	0.1475	0.1868	0.2134	0.2358	0.259	0.2843	0.314	0.3417	0.3539	0.3944	0.4318	0.4706	0.509	0.5489	0.5873	0.6274	0.6678	0.7079
Population (Thous)	5.217	9.6	13.27	16.44	19.15	21.46	23.46	25.22	26.81	28.24	29.4	30.54	31.61	32.61	33.54	34.4	35.17	35.87	36.51	37.09
Econ Migrants	5.157	4.213	3.409	2.834	2.308	1.863	1.515	1.249	1.066	0.8951	0.6273	0.606	0.5455	0.4874	0.4185	0.3527	0.2724	0.2088	0.1429	0.08333
Total Migrants	5.157	4.212	3.407	2.831	2.304	1.86	1.511	1.246	1.062	0.8923	0.6231	0.6016	0.5408	0.4822	0.4126	0.3464	0.2653	0.2014	0.1348	0.07457
Labor Force	6.43	11.18	14.5	17.03	18.91	20.37	21.52	22.44	23.18	23.79	24.17	24.59	25.01	25.42	25.86	26.3	26.75	27.18	27.6	28
Demand (Bil Fixed 96$)	1.535	1.631	1.678	1.703	1.702	1.692	1.686	1.686	1.699	1.711	1.693	1.738	1.776	1.818	1.861	1.907	1.951	2.001	2.051	2.101
Output (Bil Fixed 96$)	2.621	2.65	2.643	2.623	2.588	2.55	2.517	2.492	2.477	2.464	2.44	2.454	2.466	2.483	2.501	2.522	2.544	2.569	2.596	2.623

* For the 2003-2004 school year, the Executive Budget is proposing a reduction in state aid to elementary and secondary education of $1.84 billion relative to the Budget Division's baseline. This includes a proposed year-to-year reduction of $1.24 billion.

** The $1.84 billion would be raised by a set of progressive income tax surcharges on the portions of income over $100,000. The average effective federal income tax offset for the affected taxpayers is stimated to be 25.5%.

Appendix A: The ITEP Econometric Model and its Application to School Funding

The Model

To determine the impacts of various fiscal policies and economic proposals, ITEP uses a detailed economic model of each state's economy developed and updated by Regional Economic Models, Inc. (REMI). This is the same economic model that the Empire State Development Corporation uses for its cost-benefit analyses of state economic development deals. The model is a policy simulation model designed to describe the linkages within the state's economy and allow the depiction of the consequences of a wide range of policies and events on the economy. It incorporates state-specific data and national economic trends and relationships to produce a mathematical reproduction of the state economy.

To simulate the effects of a real-world change or development, the change is first stated in the language of economics. This language describes events in terms of their economic functions and implications. The language is precise and sometimes subtle. As used in this economic model, for example, the term "Increase in Output" means that more of a good is produced and, since the local requirements for the good is unchanged, the output is shipped outside the region. A related term, "Increase in Demand" means that local consumers want more of the good, but only a portion of that demand will be fulfilled by local producers, with the remainder being imported from outside the region. An increase in demand may cause the price of the good to rise if the model determines that the product is produced and used primarily within the region. Expressing events in terms of economic variables allows careful and objective consideration of the event's impacts and implications.

The model is sensitive to a very wide range of policy and project alternatives and to interactions between the regional, state, and national economies. It is composed of explicit cause-and-effect relationships, such as:

- oBusinesses use labor, capital, fuel, and intermediate goods to produce output.
- oBusinesses change output in response to changes in prices and costs.
- oThe supply and demand for labor depends on wage rates.
- oThe work force expands when real after-tax wages or the likelihood of being employed increases in a region.

The cause-and-effect structure of the model allows the results to be explained in terms of conventional economic theory and relationships.

Simulations using the model begin by projecting a baseline forecast for each state based on historic trends and relations and on the expected outlook for the state and the nation. Policy changes that will affect this baseline forecast can then be introduced using one or more of the 8,000-plus variables contained in the model. The change can be in the form of policy changes (increases or cuts in various taxes, expansions or reductions in public programs, changes in regulations or standards) or market developments (an increase in demand for lumber, a rise in the price of imported energy, a new aircraft engine assembly plant, or an increase in the occupational training of the local workforce). Any number of changes can be simulated at the same time. The initial changes introduced into the model produce impacts on the region's economic output; population & labor supply; wages, prices & profits; labor & capital demand; and local industry

market shares. Through the feed-back responses in the model, each of these induced impacts, in turn, produces further impacts of their own, which produce additional impacts, and so on, until the economy returns to an equilibrium condition. For any given time period the model does not strictly require a return to equilibrium. However, it continually exerts tendencies pushing the results toward equilibrium. The final results are presented as detailed changes in employment, income, population, and the demand for public services in the area.

The data contained in the model is from original sources, primarily the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Census Bureau, U.S. Department of Energy, among others. For most series the data, history extends back to1969. The final results of the modeling technique is a representation of the regions economy that predicts demand and supply conditions across 172 industry sectors, 94 occupations, 25 final-demand sectors, and 202 age & sex categories.

A demographic component built into the model provides the ability to identify the changes in the workforce and in the local population resulting from a simulation. Changes in local employment opportunities, real wages, living costs, and taxes lead to changes in the amount of labor supplied in the region. Changes in the local labor supply, in turn, leads to changes in the local population. An initial increase in labor requirement would be met in part by workers commuting into the region to pursue employment opportunities. Over time, a portion of these commuters and their families will move into the area, increasing the local population and placing added demand on public services. The model can produce detailed forecast results of the state's population by age, race, and sex.

The model incorporates forecasts of factor productivity and allows the option to modify the forecasts to accommodate policies that would change any of those productivities. Similarly, the model contains estimates of each regions relative amenity, or quality-of-life, values. These amenity values, derived from heuristic analysis, are used to explain why individuals and firms chose to locate in one region as opposed to another when the directly measurable economic factors are equal.

Education Spending: Schools, Teachers and the Ripple Effect

The economic impacts start with consideration of the direct spending associated with the education budget: compensation for teachers, administrators and other education related personnel; costs associated with transportation, public safety, environment and facility maintenance; purchases of school supplies, material and equipment, and business services. These direct, or "first round", effects then produce indirect effects of their own. For example, the wages paid to school employees becomes the income that supports consumer spending in the community; school building expansions employ local construction and maintenance services; and school purchases ring up sales of local businesses. The direct education effects are based on the actual school budget figures as reported to the U.S. Bureau of the Census.

Direct spending for K-12 education involves first the employment of teachers, school administrators, classroom aids, clerical, maintenance, security and others whose jobs and income come directly from the educational system. This analysis looks at the effects of setting state aid to

education for the 2003-2004 school year at a level $1.84 billion higher than that recommended by Governor Pataki in his Executive Budget. These amounts are assumed to grow with the rate of inflation in subsequent years. This added spending is assumed to be spent on similar items and in similar proportions as current spending.

The income earned by educational activities becomes the source of spending for households in the community. School generated earnings pay for houses, automobiles, groceries, tickets to the theater, and all other forms of consumer spending. In addition, the activities of operating a school system have a direct bearing on the revenues and employment of firms and non-school individuals who supply the education system with goods and services. Building contractors, food vendors, office suppliers, and other school service providers benefit from the direct spending by educational institutions and their incomes as well become part of the local consumer spending. The increase in employment, though continuing to be positive, diminishes over time. This is in part due to wage increases and in part to productivity improvements. Under the increased spending proposal, school related salaries (both educational and private sector spin-off) will rise slightly in response to the added demand for their services. This is how new teachers are attracted into the profession. An implication of this salary rise is that a given amount of spending will purchase fewer jobs. In addition to the wage increase, producers of goods and services continually become more efficient each year requiring progressively fewer workers to meet the added demand brought on by the new spending.

Qualities Special To Education: It's Role In Enhancing Regional Quality Of Live And Competitiveness

Among the budgetary options facing state governments education stands out as the one to which voters consistently favor devoting more resources. It is also probably the one that individuals and businesses make location decisions on. Public support for education is generally not based on the number of jobs created through education spending, but rather is primarily motivated by the prospect of improved future earning power of students through improving their productivity in the workforce. Also factored into the public's support is the improved perception of the community associated with increased educational effort. Improving workforce productivity and the resulting improvement in student's future income through education is a long-term process involving many years of exposure to the improved educational process. The regional competitiveness effects, however, occur almost immediately and continue to build over time.

The competitiveness aspect of education spending is predicated on the fact that people prefer to live in areas with comparatively better schools. Increased educational spending makes the effected community a more desirable place to live and work, and as a consequence, more people want to move into the area. This increase in the region's attractiveness also means that, among other factors, people are more willing to work in the area and to accept relatively lower wages than they might get elsewhere. The expanded labor force makes it easier for employers to find qualified workers and holds down regional employment cost for employers. The increase in the potential workforce serves to boost the long-term productivity and competitiveness of the region. These quality-of-life factors influencing regional competitiveness are sometimes referred to as location's amenity value.

The impacts of the education spending-related in-migration can be seen in such things as housing values and wages. In-migration increases the demand for housing causing housing values go up in communities where school spending increases. Even people without children prefer to live and own property in areas where schools are high-quality or at least improving.

The fact that people would pay more for housing or willingly accept lower wages to live near places with better schools is consistent with everyday observation. People routinely accept lower wages and pay higher housing prices to be near beaches, mountains, golf courses, areas with broad choices for shopping, recreation and leisure activities or whatever factors contribute to their individual quality-of-life. That households willingly paying higher taxes for educational support is also consistent with a fairly straightforward line of reasoning known as "willingness to pay." Since education tax decisions are generally made in a democratic process where voters voluntarily choose to increase their own taxes (either direct vote, as in some regions, or by representative vote in others), then it is reasonable to assume that individuals believe the educational amenities are worth at least what they as taxpayers have been shown to be willing to pay for them. This logic suggests that while individuals might value the educational improvements at least as much as the taxes required to provide them (i.e., they might receive what economists call "consumer surplus") it is unlikely that they value those improvements at a level less than what they collectively choose to pay. This is reinforced by the empirical observations regarding household migration. Adding amenity consideration to the equation the overall economic impact of the spending/taxing process has a relatively small impact in the near term. However, over time as businesses and individuals make location decisions and the area adjusts to the higher quality of education, economic growth continues to increase, largely due to amenity related changes.

Taxes: Paying The Piper

Federal law allows income taxes and property taxes to be taken as deductions in figuring federal taxes, while sales and excise-type taxes are not deductible. As a result, in raising a given amount of revenue, an income or property tax will leave more money in the hands of state residents than would the same amount of revenue raised from a sales tax. For example, when a taxpayer pays $100 to the state in sales taxes, that taxpayer bears 100% of the final burden of the tax. When that taxpayer pays that same $100 to the state in income taxes, however, the taxpayer's federal taxable income is reduced by that $100-generally around 28% to 31% for middle-income households, up to 38.6% for those at the upper end. A taxpayer at the 31% marginal federal rate would save $31 in federal taxes for each $100 paid in state income taxes. While only around half of all taxpayers itemize, these itemizers are typically upper income and account for the vast majority of income in the state. Consequently, the impact on the state's economy of selecting a deductible versus a non-deductible tax to fund the education spending is significant. Since the individual income tax is deductible against federal taxes, a substantial part of this increase in education aid is passed along to the federal treasury.

The Delicate Balance: Combining Taxing And Spending

Why does this "balanced budget" education funding policy have such a positive impact on the New

York State economy? In the near-term, the impacts derive largely from the fact that education spending is a comparatively labor-intensive activity and also comparatively local supply-intensive. Typically, eighty percent or more of school budgets go to personnel costs. Consumers, on the other hand, buy items that, on average, contain a great deal of capital as part of their costs, items such as automobiles, computers, appliances, and even food. As a result, a given amount of spending on education involves more labor than does an identical amount of general consumer spending. The second interaction is that households or businesses don't usually spend all of their money in-state or on in-state produced goods. They are prone to buy automobiles, television and electronic goods, exotic foods, and other out-of-state produced items and to take out-of-state trips and vacations. State funded public education spending, on the other hand, is heavily weighted toward in-state purchases.

Over the longer term the impacts from the increased educational funding policy proposal tend to be driven largely by the positive effects educational support has on regional competitiveness. Education spending is perceived as enhancing the quality-of-life in the effected area, which leads to more people wanting to relocate into the community. This in-migration increases the supply of labor in the area, making the labor market more competitive, and increases the demand for locally produced goods and services.

When confronting the inevitable difficult decisions regarding public spending versus taxation, policy-makers should bear in mind that both components of the balanced-budget equation have implications for jobs and income in the state. Taxpayers deserve careful consideration of the likely results of those specific decisions and not reactions based on generalized beliefs and unspecified biases.

While these results are presented from the perspective of increases in spending and taxation, the findings are essentially reversible in the sense that cuts in spending and taxes would produce roughly the same numbers but in the negative. Thus, reducing both education spending and taxes in the amounts by which this analysis increased them would produce numbers similar to those shown in the accompanying tables but with economic losses rather than gains.