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BUDGET BRIEF

Economic impact of education cuts in the Kasich budget proposal: An input-output analysis

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4/8/2011

Introduction

The fiscal year 2012-13 biennial budget proposed by the Kasich administration cuts funding for primary, secondary and higher education by \$2 billion, compared to funding in 2011. In addition to hurting the quality of education, cuts of this magnitude in a labor-intensive sector will have an economic impact felt in every school district and college town as teachers, professors, cafeteria workers, school bus drivers, janitors, coaches and ground crew workers lose their jobs. To understand the economic impact, Policy Matters Ohio commissioned an input-output study of the economic impact of the proposed cuts in education. The analysis reveals that these cuts could cause the loss of 47,291 direct, indirect and induced full time equivalent jobs in Ohio. Raising revenues instead would also impact jobs, but numerous studies have found that far fewer jobs are lost when revenues are raised than when spending is cut. A smarter approach to this budget shortfall in Ohio is a balanced one that includes revenues and addresses the budget shortfall on both sides of the ledger.

Input-output analysis

Input-output analysis is a form of economic modeling that is used to assess the linkages among different sectors in the regional economy. It shows how the spending of any industry “ripples” through an economy as purchases are made and wages spent. In this issue brief, input-output analysis is used to estimate the economic impact of cuts in the executive budget proposal for FY2012-13 in Ohio’s education sector (both K-12 and higher education). The analysis considers the economic impact in terms of direct, indirect and induced jobs:

- “Direct” jobs at the place of employment. In this case, since we are looking at K-12 education and higher education, the direct jobs would include teachers or professors, administrators, janitors, playground workers, cafeteria workers, school bus drivers, and all the other people who work at a school or university.
- “Indirect” jobs at other enterprises supplying materials, parts and services to schools and universities. This would include food processing establishments that prepare applesauce and tacos for the cafeteria; packaging companies that can the applesauce and bag the taco shells; drivers who take the products to the warehouse; workers who stock the shipments to the schools. It would also include contractors who fix the HVAC, roofers and others who might be hired by schools. In the case of universities, suppliers would include partners in research, development and publishing, in addition to food and maintenance service establishments.

- **“Induced” jobs in the local economy** are created as these educational sector workers and those in the ‘indirect’ sectors spend their earnings in restaurants, movie theaters, banks, stores, and making other household purchases.

Economic impact analysis

Employment impacts will vary by sector depending on the labor intensity of the sector, or the share of overall funding within the sector that goes to payroll. Elementary and secondary education is very labor intensive, with 83 percent of funding on average going to payroll. Higher education is also labor intensive, although less than K-12: the share of funding in higher education supporting payroll is 47 percent in Ohio, on average. Table 2 shows the direct, indirect, and induced effects per \$1 million spending in K-12 education and higher education in the Ohio economy. These impacts were estimated using IMPLAN (version 3), a software that analyzes how change in one part of the economy impacts all other parts of the economy, with data for the state of Ohio. The analysis was conducted at the end of March 2011.

Table 1 demonstrates that for every million dollars spent on education in Ohio, 16 direct, full time equivalent (FTE) jobs are created in primary and secondary education. One additional, ‘indirect’ FTE job is created in suppliers to the school or schools. Another 6.8 FTE ‘induced’ jobs are created in the community as the people who work those direct and indirect jobs make household purchases in local businesses. There is a similar effect for higher education. A million dollars spent on higher education creates 13.1 FTE jobs. As the university makes purchases, another 2.2 indirect FTE jobs are created in suppliers. As professors and maintenance staff spend their earnings in the community, 6.1 FTE jobs are created (induced jobs) in stores, gyms and child care centers.

Table 1. Employment per million dollars in spending in education in Ohio

Educational Sector	Direct	Indirect	Induced	Total
K-12 Education	16.0	1.0	6.8	23.8
Higher Education	13.1	2.2	6.1	21.4

Source: Policy Matters Ohio, based on data analysis by the Political Economy Research Institute (PERI), University of Massachusetts-Amherst, March 31, 2011

Economic impact is also considered in terms of multipliers. A multiplier is the factor by which each job in a given sector supports additional jobs through indirect and induced effects in the local economy. This input-output analysis indicates that the multiplier is 1.5 for primary and secondary education and 1.6 for higher education. In other words, for K-12 education, for each direct job created in the economy, another .5 FTE jobs is created in indirect and induced jobs. For higher education, for each direct job, .6 additional FTE jobs are created in indirect and induced employment.

As an example, a school district that is losing \$5 million in state funding may be expected to pink slip 80 employees – teachers, lunchroom workers, bus drivers, or maintenance workers. (The actual number affected may be much higher, as jobs lost may include part time workers.) Another five FTE jobs will be lost in companies that supply the school with cleaning solvents, HVAC repair, snacks and Band-Aids. Thirty-four more will be lost as reduced spending on household purchases is felt at Kroger’s, JC Penney, Kindercare, GMC Theaters and Subway.

Job loss in Ohio due to Kasich budget cuts to education

The tables below explain job loss resulting from the proposed budget cuts in K-12 and higher education over the state fiscal year 2012-2013 biennium. The greatest impact occurs in

fiscal year 2012, when the cuts are the deepest (Table 2), totaling \$1.593 billion. Of that enormous funding reduction, the cut of \$1.324 billion to K-12 causes the loss of 21,184 direct jobs within school districts across the state. The indirect and induced jobs lost bring the total to 31,525 jobs. Another 3,528 direct jobs are lost on Ohio campuses, with indirect and induced effects bringing the total job loss to 5,753. In fiscal year 2012, a total of 37,279 jobs could be lost in Ohio if the cuts to education proposed in the Kasich budget are enacted.

Table 2: Direct, indirect and induced job loss from proposed cuts to education, FY2012

Educational sector	Spending Cuts FY 2012	Total Jobs At Stake			
		Direct	Indirect	Induced	Total
K-12 Education	\$1.324 billion	21,184	1,335	9,007	31,525
Higher Education	\$269 million	3,528	582	1,644	5,753
Total	\$1.593 billion	24,711	1,917	10,651	37,279

Source: Policy Matters, based on data analysis by PERI, 3/30/2011.

Proposed cuts are smaller in fiscal year 2013 compared to fiscal year 2012, so job loss, though significant, would be less staggering than in the prior year. As shown in Table 3, the Kasich budget would cut \$412 million more from Ohio's education sector, compared to the prior year. These jobs would be concentrated in elementary and secondary education, since funding is restored to higher education and some jobs are gained. Nearly 8,000 direct jobs would be eliminated in K-12 school districts, while over a thousand will be restored at campuses. In total, another 10,012 direct, indirect and induced jobs could be lost in fiscal year 2013 if the proposed cuts to education in the Kasich Administration budget proposal are enacted.

Table 3: Direct, indirect and induced job loss from proposed cuts to education, FY2013

Educational sector	Spending Cuts FY2013	Total Jobs At Stake			
		Direct	Indirect	Induced	Total
K-12 Education	\$497 million	7,949	501	3,380	11,830
Higher Education	(\$85 million restored)	-1,115	-184	-519	-1,818
Total	\$412 million	6,835	317	2,861	10,012

Source: Policy Matters, based on data analysis by PERI, 3/30/2011.

In sum, the economic impact of cuts to public education proposed in the Kasich budget could cost the 47,291 direct, indirect and induced jobs over the biennium. Of those losses, 31,546 would be direct jobs lost in schools, colleges and universities. Another 2,234 jobs would be lost at Ohio establishments supplying those schools and campuses and 13,512 more would be lost as job direct and indirect job loss is felt as reduced spending on household purchases throughout the Ohio economy (Table 4).

Table 4: Direct, indirect and induced job loss from proposed cuts to education, FY2012-2013

Educational Sector	Spending Cut, FY2012-13	Jobs			
		Direct	Indirect	Induced	Total
K-12 Education	\$1.821 billion	29,133	1,835	12,387	43,355
Higher Education	\$184 million	2,413	398	1,124	3,936
Total	\$2.005 billion	31,546	2,234	13,512	47,291

Source: Policy Matters, based on data analysis by PERI, 3/30/2011.

Economic impact of revenue increases

The way to avoid this kind of damage to the economy of Ohio is to raise revenues to fill the budget hole instead of relying solely on cuts. Raising revenues has a much less severe impact on employment than cutting spending. For example:

- A California comparison of the jobs impact of state spending cuts compared to raising an equivalent sum through progressive taxation demonstrated that spending cuts alone would cost the state 331,000 jobs, while an alternative proposal, which combined raising of \$5.4 billion dollars through progressive taxation along with spending cuts, saved 244,000 jobs, as compared to the Governor's spending cut proposal.¹
- Dr. Alberta Charney at the University of Arizona calculated that an \$868 million budget cut would cost the state of Arizona 14,092 jobs, and cause the loss of another \$442.5 million in federal funds, bringing total job loss to 20,510, but a sales tax increase of the same proportion would cost 7,383 jobs.²
- A 2003 study issued by the Fiscal Policy Institute found positive economic effects if New York State maintained its K-12 education spending through a \$1.84 billion increase in income taxes, compared to cutting that amount of education spending.³ A more recent New York study came to similar conclusions.⁴

There are a number of reasons why spending cuts cause more job loss than raising revenues. The public sector is labor intensive, and public elementary and secondary education are especially labor intensive. Tax cuts do not yield as many jobs as spending on education because few private sector activities are as labor intensive as the public education. Second, place matters. Spending cuts hurt the local economy as public purchases dwindle and wages spent on Main Street vanish.⁵ The geographic impact of taxation is less focused. Higher income earners, for example, have purchasing power that extends beyond the local sphere of commerce. Businesses buy regionally, nationally or internationally.⁶ Third, economic theory tells us unlike spending cuts, tax increases will be funded partially from savings, cushioning the direct impact on demand.⁷ Then-Congressional Budget Office Director Peter Orszag, who later headed the federal Office of Management and Budget, and Nobel Prize Laureate Joseph Stiglitz emphasized in a coauthored article that cutting state programs, particularly those that serve lower- and middle-income families, threatens to deepen a recession:

*“Basic economic theory suggests that direct spending reductions will generate more adverse consequences for the economy in the short run than either a tax increase or a transfer program reduction. [...] Tax increases on higher-income families are the least damaging mechanism for closing state fiscal deficits in the short run. Reductions in government spending on goods and services, or reductions in transfer payments to lower-income families, are likely to be more damaging to the economy.”*⁸

¹ Ken Jacobs, Laurel Lucia and T. William Lester, “*The Economic Consequences of Proposed California Budget Cuts*,” Center for Labor Research and Education, University of California at Berkeley, May 2010.

² Dr. Alberta Charney, “*Sales tax increase versus expenditure cuts: An economic Impact Study*”, posted at the University of Arizona’s Eller College of Management Website, March 19, 2010 at http://ebr.eller.arizona.edu/research/articles/2010/sales_tax_increase_vs_expenditure_cuts.asp

³ *Schools, Taxes and the New York Economy: An Economic Analysis of a Balanced Budget Alternative to the Governor’s School Aid Cuts*, Fiscal Policy Institute, April 24, 2003.

⁴ *Achieving Adequacy: Tax Options for New York in the Wake of the CFE Case*, Institute on Taxation and Economic Policy, April 2005.

⁵ Peter Orszag and Joseph Stiglitz, “Budget cuts vs tax increases at the state level: Is one more counter productive than the other during a recession?” Center on Budget and Policy Priorities, Revised November, 2001.

⁶ Ibid

⁷ Ibid

⁸ Citation in: Johnson, N. (2008). *Budget Cuts or Tax Increases at the State Level: Which is Preferable During an Economic*

Summary and Conclusion

Public jobs are real jobs. Purchases by schools and campuses support enterprises across the Ohio economy. As educational workers spend their money on household goods, they support private sector jobs in the community. Ohio cannot afford to lose jobs at any time, but if we lose them now, as the fragile economy struggles to grow out of the Great Recession, long-term harm could result. Our analysis reveals that 47,291 direct, indirect and induced jobs in Ohio would be lost over the biennium as a result of proposed cuts to education sectors. A balanced approach to the budget, which would address the fiscal crisis on both sides of the ledger, would cost fewer jobs and leave the economy – and our schools – in better shape. Restoring the top income tax bracket on Ohio’s wealthiest earners, who have seen robust income growth over the past 30 years while others have lost ground,⁹ could raise revenues needed for services and to support the economy. Replenishing revenues from the corporate sector, where taxes were slashed in 2005, could make the public finance system more stable and balanced. Closing unnecessary or outmoded tax expenditures could provide revenues to support education in Ohio, protecting the economy while making the overall system more equitable.

The kind of job loss forecast from proposed cuts to the education sector alone are dangerous, especially considering how weak the economy is. We urge legislators to take a balanced approach to the budget, and to make the smart choices for Ohio’s economy.

Downturn? Center on Budget and Policy Priorities: Washington, D.C.

⁹ Amy Hanauer, *State of Working Ohio 2010*, Policy Matters Ohio, September, 2010 at <http://www.policymattersohio.org/SOWO2010.htm>