

Economic Impact of Proposed Tax Reductions in North Carolina

Prepared by:

G. Jason Jolley, Ph.D., E. Brent Lane, & Aaron Nousaine¹

UNC Center for Competitive Economies (C³E),

Kenan Institute/Kenan-Flagler Business School

UNC-Chapel Hill

April 15, 2011

Abstract

The North Carolina General Assembly asked the UNC Center for Competitive Economies (C³E) to assist in estimating the economic impacts of reduced taxation in North Carolina. Specifically, C³E was asked to estimate the employment effects of the following tax policy changes:

- Expiration of the 1-cent sales tax
- Expiration of personal and corporate income surtaxes
- Reduction in the corporate tax rate effective tax year 2012
- Reduction in business income taxes for S-corporation, limited liability corporations (LLCs), and sole proprietorships, including exemption of the first \$50,000 in non-passive business income from taxation.

The cumulative impacts for fiscal year 2011-2012 and fiscal year 2012-2013 are represented below. The initial tax changes will result in a total of \$1.8 billion in increased industry output, \$564 million in labor income, and the creation of 16,083 new jobs at an average wage of \$35,082. Once the tax reduction impacts are fully realized in fiscal year 2012-2013, the total industry output will increase to \$2.3 billion and labor income will increase to nearly \$700 million. A total of 19,439 new jobs are projected (16,083 in the FY 2011-12 and an additional 3,356 in FY 2012-2013) at an average wage of \$35,969.

Summary of Cumulative Impacts, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$1,365,384,000	\$409,765,000	\$534,073,000	\$2,309,220,000	1.69
Employment	11,658	2,917	4,864	19,439	1.67
Labor Income	\$405,964,000	\$126,599,000	\$166,627,000	\$699,189,000	1.72
Ave. Income Per Job					\$35,969

Note: Totals may not sum due to rounding

¹Mr. Lane is the Director of the UNC Center for Competitive Economies. Dr. Jolley is the Senior Research Director for the UNC Center for Competitive Economies and Adjunct Assistant Professor, Kenan-Flagler Business School. Mr. Nousaine is a Research Associate with the UNC Center for Competitive Economies and graduate student in the Department of City and Regional Planning. Contact: Jason_Jolley@unc.edu or 919(843-6287).

SECTION I:

ECONOMIC IMPACT ANALYSIS METHODOLOGY

The North Carolina General Assembly asked the UNC Center for Competitive Economies (C³E) to assist in estimating the economic impacts of reduced taxation in North Carolina. Specifically, C³E was asked to estimate the employment effects of the following tax policy changes:

- Expiration of the 1-cent sales tax
- Expiration of personal and corporate income surtaxes
- Reduction in the corporate tax rate effective tax year 2012
- Reduction in business income taxes for S-corporation, limited liability corporations (LLCs), and sole proprietorships, including exemption of the first \$50,000 in non-passive business income from taxation.

The North Carolina General Assembly's Fiscal Research Division provided estimates of the tax savings for each of these reductions as follows in table 1:

Table 1: Prospective Tax Changes		
	FY2011-2012	FY2012-2013
Expiration of the 1-cent sales tax	\$1,124,330,000	\$1,137,970,000
Expiration of personal income surtaxes:	\$172,100,00	\$174,200,000
Expiration of corporate income surtaxes:	\$29,000,000	\$29,300,000
Reduction in the corporate tax rate effective tax year 2012:	\$135,000,000	\$308,500,000
Reduction in business income taxes for S-corporation, limited liability corporations (LLCs), and sole proprietorships, including exemption of the first \$50,000 in non-passive business income from taxation:	\$131,600,000	\$336,400,000
Total:	\$1,592,030,000	\$1,986,330,000

Note: Totals may not sum due to rounding

C³E calculated the estimated direct, indirect, and induced impacts of these tax reductions, using IMPLAN Professional software². IMPLAN is an input-output modeling program that permits researchers to estimate the projected effects of an exogenous increase in demand, such as an infusion of tax reduction monies, in a specified geographic region, such as North Carolina.

- "Direct" effects represent the changes for a given industry resulting from the increase in final demand for that same industry on, for example, payroll.

² IMPLAN models are static models that cannot adjust for future structural changes in a study area's economy. Therefore, it is best to limit study periods to around three to four years.

- “Indirect” effects include the impacts on all local industries resulting from industries purchasing from industries in multiple iterations as a consequence of this increase in final demand.
- Induced” effects are the increases in spending by households resulting from the increases in income and population that were caused by both the direct and indirect effects. The total effect of the new investments from the proposed projects is represented by the sum of all three effects - direct, indirect and induced.

Time and data limitations do not allow the researchers to conduct a true counterfactual analysis. This document provides a rough estimation of the economic impacts of tax reduction given the available data, assumptions, and limitations outlined in this analysis. No assumptions are made about the public sector impacts of having reduced tax revenues, which may limit the net effects of the benefits outlined here.

Sales Tax Expiration Models:

IMPLAN 2.0 software allows researchers to estimate the economic effects of a change in income across multiple household income categories. IMPLAN estimates how the change in income would impact the economy based on the average spending patterns of households in the specified income range. Reducing the state sales tax would have an impact on both businesses and households in North Carolina. To simplify the analysis, C³E assumes that 100% of the benefits of sales tax reduction will accrue to households and models that effect. C³E utilizes the October 2010 Consumer Expenditure Survey from the U.S. Bureau of Labor Statistics (BLS) to estimate the percentage of retail sales for each household income category. BLS’s survey is based on “consumer units” which roughly approximate households in average size and income characteristics. The specified income levels for these “consumer units” do not precisely match the IMPLAN categories, so the researchers estimated “down” based on the lower income ranges in North Carolina relative to the U.S. average.

For example, input data for the income range of \$50,000 to \$75,000 in the IMPLAN model was derived using the BLS income categories \$50,000-\$69,999 and \$70,000-\$79,999. Based on the percentage of retail sales that occur in each income category, the researchers approximate the household income levels where the benefits of a sales tax reduction are likely to occur. This additional revenue for each category of household income also serves as the input for that income category in the IMPLAN model. Table 2 demonstrates that total tax savings does accrue to higher income households, since these households typically spend more money on retail sales. Many scholars regard the sales tax as regressive because lower income households pay a disproportionately higher percentage of their disposal income on items subject to a sales tax. For this reason, there may be additional benefits from a reduced sales tax that accrue to lower income North Carolinians that is beyond the scope of this economic model.

IMPLAN models the traditional basket or mix of goods that households spend money on in each household income bracket. This allows a prediction of the economic impacts across multiple sectors, which are then aggregated to determine the total effect of this spending.

Household Income Category	BLS Estimates of Total Consumer Spending (in Thousands)	Percentage of BLS Estimates of Total Retail Spending	FY2011-12 Percentage of Additional Revenue to Household Category from 1% NC Sales Tax Reduction	FY2012-13 Percentage of Additional Revenue to Household Category from 1% NC Sales Tax Reduction
<\$10K	\$201,770,015	3%	\$38,296,117	\$38,760,713
\$10-\$15K	\$167,970,966	3%	\$31,881,030	\$32,267,800
\$15-\$25K	\$623,403,048	11%	\$118,322,420	\$119,757,868
\$25-\$35K	\$468,981,237	8%	\$89,013,031	\$90,092,907
\$35-\$50K	\$452,644,532	8%	\$85,912,310	\$86,954,570
\$50-\$75K	\$1,254,382,220	21%	\$238,082,794	\$240,971,136
\$75-\$100K	\$647,083,677	11%	\$122,817,023	\$124,306,998
\$100k-\$150k	\$1,057,487,292	18%	\$200,711,972	\$203,146,943
>\$150K	\$1,050,012,782	18%	\$199,293,304	\$201,711,064
Total	\$5,923,735,769	100%	\$1,124,330,000	\$1,137,970,000

Source: October 2010 Consumer Expenditure Survey from the U.S. Bureau of Labor Statistics (BLS) and Sales tax reduction savings estimates provided by Division of Fiscal Research, N.C. General Assembly.

Note: Totals may not sum due to rounding

Personal Income Surtax Expiration Models:

The State of North Carolina imposes 2-3% surtaxes on personal income for certain taxpayers. For those “married filing jointly” the applicable percentage is 2% for taxable income greater than \$100,000 but less than \$250,000 and 3% for those with taxable income greater than \$250,000. The level of surtax (if any) is dependent on filing status and North Carolina taxable income as outlined in table 3.

Table 3: Surtax Percentage Table		
If Filing Status is	And NC Taxable Income on Line 13, Form D-400 is	The Applicable Percentage is
Married Filing Jointly/Qualifying Widow(er)	Greater than \$100,000 but does not exceed \$250,000	2%
	Greater than \$250,000	3%
Head of Household	Greater than \$80,000 but does not exceed \$200,000	2%
	Greater than \$200,000	3%
Single	Greater than \$60,000 but does not exceed \$150,000	2%
	Greater than \$150,000	3%
Married Filing Separately	Greater than \$50,000 but does not exceed \$125,000	2%
	Greater than \$125,000	3%

Source: North Carolina Department of Revenue, <http://www.dorn.com/taxes/individual/surtax.html>

The IMPLAN model is based on household income prior to any deductions and not taxable household income after standard/itemized deductions are taken. It is assumed that only a small percentage of individuals with household income in the range of \$75,000 to \$100,000 will have taxable incomes in the ranges impacted by this surtax expiration. Estimations of the effects of this reduction are apportioned and modeled as follows in table 4.

Table 4: Allocation of Personal Income Surtax Expiration			
Household Income	Percentage of Total Benefiting from Personal Income Surtax Expiration	FY2011-2012 Additional Revenue from Personal Income Surtax Expiration	FY2012-2013 Additional Revenue from Personal Income Surtax Expiration
\$75-\$100K	10%	\$17,210,698	\$17,419,577
\$100k-\$150k	40%	\$68,842,791	\$69,678,228
>\$150K	50%	\$86,053,488	\$87,097,785
Total	100%	\$172,100,000	\$174,200,000

Source: Total savings estimates provided by Division of Fiscal Research, N.C. General Assembly

Note: Totals may not sum due to rounding

A sensitivity analysis was conducted to assume that a slightly larger percentage of the benefits accrue to higher income households as outlined in table 5.

Household Income	Percentage of Total Benefiting from Personal Income Surtax Expiration	FY2011-2012 Additional Revenue from Personal Income Surtax Expiration	FY2012-2013 Additional Revenue from Personal Income Surtax Expiration
\$75-\$100K	5%	\$8,605,349	\$8,709,779
\$100k-\$150k	35%	\$60,237,442	\$60,968,450
>\$150K	60%	\$103,264,186	\$104,517,342
Total	100%	\$172,100,000	\$174,200,000

Source: Total savings estimates provided by Division of Fiscal Research, N.C. General Assembly

Note: Totals may not sum due to rounding

Corporate Income Surtax Expiration, Lower Corporate Income Tax, and Lower Business Income Tax Models:

The North Carolina General Assembly Fiscal Research Division provided estimates of the savings to taxpayers based on three additional, prospective changes to the tax code. These include 1) expiration of the corporate income surtax, 2) lowering the corporate income tax rate to 4.9% (down from 6.5%) in tax year 2012, and lowering business income taxes for S-corporations, limited liability corporations (LLCs), and sole proprietorships by exempting the first \$50,000 of non-passive business income.

It is challenging to precisely and accurately model the economic effects of such changes given the time and resource constraints. However, the researchers can roughly approximate the benefits of such changes using the IMPLAN modeling software and some basic assumptions about where these tax savings might accrue. In the absence of income tax and taxes paid by industry type, two alternatives exist to proportion the tax savings among industry/business sectors: 1) as a proportion of employment or 2) as a proportion of contribution to gross state product. Since this analysis focuses on income, gross state product contribution is a better proxy for who will receive the benefit of reduced taxation.

According to the U.S. Bureau of Economic Analysis, the top eight industry sectors contributing to North Carolina's gross state product (i.e. gross domestic product) in 2009 were

- Manufacturing
- Finance and insurance
- Real estate
- Health care and social assistance
- Professional and technical services
- Retail trade
- Wholesale trade
- Construction

These eight industry sectors comprise roughly 78 percent of the state's gross domestic product. The remaining industry categories are very small or suppressed. To simplify the analysis and ease of modeling and to account for limited data in other industry sectors, it is assumed that the tax savings will accrue to these eight sectors according to their respective weights on a 100 percent scale. This is outlined in table 6.

Table 6: Model of Additional Tax Reduction to Industry Sectors by Proportion of Gross State Product

<i>Industry Sector</i>	<i>% of GDP</i>	<i>% used for model</i>	Expiration of Corporate Income Surtax		Lower Corporate Income Tax (Tax Year 2012)		Lower Business Income Tax Rates for S-Corps, LLCs, and Sole Proprietorships, exempt first \$50,000 of non-passive business income.	
			<i>FY 2012</i>	<i>FY 2013</i>	<i>FY 2012</i>	<i>FY 2013</i>	<i>FY 2013</i>	<i>FY 2013</i>
Manufacturing	22%	28%	\$7,994,975	\$8,077,682	\$37,217,989	\$85,049,997	\$36,280,647	\$92,741,714
Finance and insurance	13%	17%	\$4,828,213	\$4,878,160	\$22,476,163	\$51,362,195	\$21,910,097	\$56,007,269
Real estate	12%	16%	\$4,567,397	\$4,614,646	\$21,262,022	\$48,587,659	\$20,726,534	\$52,981,810
Health care and social assistance	8%	11%	\$3,050,893	\$3,082,454	\$14,202,434	\$32,455,193	\$13,844,743	\$35,390,362
Professional and technical services	6%	8%	\$2,360,835	\$2,385,258	\$10,990,095	\$25,114,401	\$10,713,307	\$27,385,687
Retail trade	6%	8%	\$2,332,416	\$2,356,545	\$10,857,801	\$24,812,085	\$10,584,345	\$27,056,031
Wholesale trade	6%	8%	\$2,272,836	\$2,296,348	\$10,580,443	\$24,178,272	\$10,313,973	\$26,364,897
Construction	4%	5%	\$1,592,434	\$1,608,907	\$7,413,053	\$16,940,198	\$7,226,354	\$18,472,229
Total	78%	100%	\$29,000,000	\$29,300,000	\$135,000,000	\$308,500,000	\$131,600,000	\$336,400,000

Source: Percentage of State GDP, 2009 U.S. Bureau of Economic Analysis. Level of tax savings, N.C. General Assembly Fiscal Research Division

SECTION II:

ECONOMIC IMPACTS OF TAX REDUCTION

This section of the report outlines the direct, indirect, and induced impacts of each prospective tax change. Reported are industry output (value of goods and services produced/provided), employment, labor income, and average income per job. IMPLAN considers all jobs as full-time and does not generate a full-time equivalent calculation. This explains the relatively low-wage rates in some of the retail industry positions, which are more likely to be part-time and lower paying. Multipliers are also reported. A multiplier value of 1.5 means that for every dollar of new investment (or tax savings), it generates a total of \$1.50 in output/income. Multipliers of 3 or less are generally expected to be observed in most impact assessments. It is important to note that in each model, the job creation reported in the first fiscal year (2011-2012) represents the initial job creation. The employment numbers reported in fiscal year two (2012-2013) represent the new jobs sustained from year one and any additional new jobs created from the tax change being fully realized. For example: a change might yield 100 new jobs in fiscal year one. In fiscal year two, 120 new jobs are reported. This should be interpreted as 100 new jobs being sustained from year one and 20 new jobs being added in year two. Job numbers are not additive across fiscal years! The models addressing corporate surtax, corporate income tax, and lower business income taxes were derived using the same distribution of industry beneficiaries, which explains why the estimated average labor income is the same across models. In cases where the direct impacts for each event sum to less than the total tax reduction, this results from some of the resulting expenditure being leaked from the state in the form of foreign and domestic out-of-state trade (i.e. imported goods and services) which IMPLAN accounts for in the model. These purchases by households and industry of non-North Carolina inputs are accounted for in the model using regional purchase coefficients (RPCs) for each category modeled.

Sales Tax Expiration Models:

Tables 7 and 8 report the economic impacts of an expiration in the one-cent retail sales tax in fiscal year 2011-2012 and fiscal year 2012-2013, respectively. Direct, indirect, and induced effects are interpreted differently in this type of model than outlined earlier in the model description. Direct impacts reflect the initial round of spending by households of the tax savings, while indirect and induced reflect the second and third rounds of economic activity in the economy generated from household spending of the tax savings. In fiscal year 2011-2012 the total industry output is \$1.33 billion dollars and 11,720 jobs are expected to be created at an average wage of \$34,200 according to IMPLAN estimates.

Table 7: Impacts of Retail Sales Tax Expiration, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$766,759,000	\$223,160,000	\$337,691,000	\$1,327,611,000	1.73
Employment	7,030	1,620	3,070	11,720	1.67
Labor Income	\$226,217,000	\$69,284,000	\$105,391,000	\$400,892,000	1.77
Ave. Income Per Job					\$34,200

Note: Totals may not sum due to rounding

In fiscal year 2012-2013 the total industry output is \$1.34 billion dollars and 11,870 jobs are expected to be supported (11,720 created from year one are sustained and an additional 150 new jobs are added). Again, the average wage of \$34,200 according to IMPLAN estimates.

Table 8: Impacts of Retail Sales Tax Expiration, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$766,061,000	\$225,868,000	\$341,788,000	\$1,343,717,000	1.73
Employment	7,110	1,640	3,110	11,870	1.67
Labor Income	\$228,961,000	\$70,124,000	\$106,670,000	\$405,755,000	1.77
Ave. Income Per Job					\$34,200

Note: Totals may not sum due to rounding

Personal Income Surtax Expiration Models:

Tables 9 and 10 report the economic impacts of an expiration in the personal income surtax in fiscal year 2011-2012 and fiscal year 2012-2013, respectively. Direct, indirect, and induced effects are interpreted differently in this type of model than outlined earlier in the model description, as well. Direct impacts reflect the initial round of spending by households of the tax savings, while indirect and induced reflect the second and third rounds of economic activity in the economy generated from household spending of the tax savings. These models assume a distribution of personal income surtax expiration benefits as follows: 10% to households with incomes of \$75,000-\$100,000, 40% to households with incomes of \$100,000 to \$150,000, and 50% to households with greater than \$150,000 in income. Again, direct impacts reflect the initial round of spending by these households of the tax savings, while indirect and induced reflect the second and third rounds of economic activity in the economy in generated from household spending of the tax savings. In fiscal year 2011-2012 the total industry output is \$207 million dollars and 1,868 jobs are expected to be created at an average wage of \$33,370 according to IMPLAN estimates. In fiscal year 2012-2013, the industry output rises to \$209 million and an additional 22 new jobs are created (for a total of 1,890 jobs).

Table 9: Impacts of Personal Income Tax Expiration, Scenario 1, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$119,591,000	\$35,007,000	\$52,490,000	\$207,088,000	1.73
Employment	1,134	256	478	1,868	1.65
Labor Income	\$34,993,000	\$10,939,000	\$16,382,000	\$62,314,000	1.78
Ave. Income Per Job					\$33,370

Note: Totals may not sum due to rounding

Table 10: Impacts of Personal Income Tax Expiration, Scenario 1, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$121,043,000	\$35,431,000	\$53,127,000	\$209,601,000	1.73
Employment	1,148	259	484	1,890	1.65
Labor Income	\$35,418,000	\$11,072,000	\$16,581,000	\$63,070,000	1.78
Ave. Income Per Job					\$33,370

Note: Totals may not sum due to rounding

Tables 11 and 12 report a sensitivity analysis of the economic impacts of an expiration in the personal income surtax in fiscal year 2011-2012 and fiscal year 2012-2013, respectively. These models assume a distribution of personal income surtax expiration benefits as follows: 5% to households with incomes of \$75,000-\$100,000, 35% to households with incomes of \$100,000 to \$150,000, and 60% to households

with greater than \$150,000 in income. These models yield little substantive changes, which suggest the model is fairly robust to the distribution of the tax savings; therefore the economic impact estimates are unlikely to change substantively if the actual distribution is different than modeled here. For this reason, scenario 1 impacts are reported in cumulative totals.

Table 11: Impacts of Personal Income Tax Expiration, Scenario 2, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$119,873,000	\$35,102,000	\$52,535,000	\$207,510,000	1.73
Employment	1,141	257	478	1,876	1.64
Labor Income	\$35,003,000	\$10,969,000	\$16,396,000	\$62,368,000	1.78
Ave. Income Per Job					\$33,240

Note: Totals may not sum due to rounding

Table 12: Impacts of Personal Income Tax Expiration, Scenario 2, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$121,328,000	\$35,528,000	\$53,173,000	\$210,028,000	1.73
Employment	1,155	260	484	1,899	1.64
Labor Income	\$35,427,000	\$11,102,000	\$16,595,000	\$63,124,000	1.78
Ave. Income Per Job					\$33,240

Note: Totals may not sum due to rounding

Corporate Income Surtax Expiration, Lower Corporate Income Tax, and Lower Business Income Tax Models:

Tables 13 and 14 report the economic impact of expiration of the corporate income surtax. In fiscal year 2011-2012 the total industry output is \$32 million dollars and 245 jobs are expected to be created at an average wage of \$40,530 according to IMPLAN estimates. In fiscal year 2012-2013, the industry output rises to \$32 million and an additional 2 new jobs are created (for a total of 247 jobs).

Table 13: Corporate Income Surtax Expiration, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$20,143,000	\$6,386,000	\$5,986,000	\$32,514,000	1.61
Employment	146	44	55	245	1.67
Labor Income	\$6,090,000	\$1,953,000	\$1,866,000	\$9,909,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

Table 14: Corporate Income Surtax Expiration, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$20,351,000	\$6,452,000	\$6,048,000	\$32,851,000	1.61
Employment	148	44	55	247	1.67
Labor Income	\$6,153,000	\$1,973,000	\$1,885,000	\$10,011,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

Tables 15 and 16 report the economic impact of expiration of the corporate income tax. In fiscal year 2011-2012 the total industry output is \$151 million dollars and 1,138 jobs are expected to be created at an average wage of \$40,530 according to IMPLAN estimates. In fiscal year 2012-2013, the industry output rises to \$345 million and an additional 1,463 new jobs are created (for a total of 2,601 jobs).

Table 15: Lower Corporate Income Tax, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$93,767,000	\$29,728,000	\$27,865,000	\$151,360,000	1.61
Employment	680	204	254	1,138	1.67
Labor Income	\$28,351,000	\$9,091,000	\$8,685,000	\$46,127,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

Table 16: Lower Corporate Income Tax, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$214,275,000	\$67,935,000	\$63,676,000	\$345,885,000	1.61
Employment	1,554	466	580	2,601	1.67
Labor Income	\$64,786,000	\$20,776,000	\$19,848,000	\$105,410,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

Tables 17 and 18 report the economic impact of a lower business income tax. In fiscal year 2011-2012 the total industry output is \$147 million dollars and 1,109 jobs are expected to be created at an average wage of \$40,530 according to IMPLAN estimates. In fiscal year 2012-2013, the industry output rises to \$377 million and an additional 1,727 new jobs are created (for a total of 2,836 jobs).

Table 17: Lower Business Income Tax, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$91,405,000	\$28,980,000	\$27,163,000	\$147,548,000	1.61
Employment	663	199	248	1,109	1.67
Labor Income	\$27,637,000	\$8,862,000	\$8,467,000	\$44,966,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

Table 18: Lower Business Income Tax, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$223,654,000	\$74,079,000	\$69,434,000	\$377,434,000	1.61
Employment	1,694	509	633	2,836	1.67
Labor Income	\$70,646,000	\$22,654,000	\$21,643,000	\$114,943,000	1.63
Ave. Income Per Job					\$40,530

Note: Totals may not sum due to rounding

SECTION III:

SUMMARY

This section of the report outlines the cumulative impacts of the tax reductions/expirations discussed in this report. Time and data limitations do not allow the researchers to conduct a true counterfactual analysis. This is a rough estimation of the economic impacts of tax reduction given the available data, assumptions, and limitations outlined in this analysis. No assumptions are made about the public sector impacts of having reduced tax revenues, which may limit the net effects of the benefits outlined here. Additionally, no assumptions are made about the fiscal impacts (i.e. tax generate) created by this economic activity.

Cumulative Impacts:

The initial tax changes will result in a total of \$1.8 billion in increased industry output, \$564 million in labor income, and the creation of 16,083 new jobs at an average wage of \$35,082. Once the tax reduction impacts are fully realized in fiscal year 2012-2013, the total industry output will increase to \$2.3 billion and labor income will increase to nearly \$700 million. A total of 19,439 new jobs are projected (16,083 in the FY 2011-12 and an additional 3,356 in FY 2012-2013) at an average wage of \$35,969.

Table 19: Cumulative Impacts, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$1,091,665,000	\$323,261,000	\$451,195,000	\$1,866,121,000	1.71
Employment	9,652	2,322	4,108	16,083	1.67
Labor Income	\$323,288,000	\$100,129,000	\$140,791,000	\$564,208,000	1.75
Ave. Income Per Job					\$35,082

Note: Totals may not sum due to rounding

Table 20: Cumulative Impacts, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
Industry Output	\$1,365,384,000	\$409,765,000	\$534,073,000	\$2,309,220,000	1.69
Employment	11,658	2,917	4,864	19,439	1.67
Labor Income	\$405,964,000	\$126,599,000	\$166,627,000	\$699,189,000	1.72
Ave. Income Per Job					\$35,969

Note: Totals may not sum due to rounding

The following tables are also provided to allow for tax by tax comparisons of the relative impacts of each prospective change by industry output, employment, and labor income effects.

Table 21: Impact on Economic Output, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	\$766,759,000	\$223,160,000	\$337,691,000	\$1,327,611,000	1.73
personal income surtaxes:	\$119,591,000	\$35,007,000	\$52,490,000	\$207,088,000	1.73
corporate income surtaxes:	\$20,143,000	\$6,386,000	\$5,986,000	\$32,514,000	1.61
Reduction in the corporate tax rate:	\$93,767,000	\$29,728,000	\$27,865,000	\$151,360,000	1.61
Business income taxes:	\$91,405,000	\$28,980,000	\$27,163,000	\$147,548,000	1.61
Total:	\$1,091,665,000	\$323,261,000	\$451,195,000	\$1,866,121,000	1.71

Note: Totals may not sum due to rounding

Table 22: Impact on Economic Output, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	\$776,061,000	\$225,868,000	\$341,788,000	\$1,343,717,000	1.73
personal income surtaxes:	\$121,043,000	\$35,431,000	\$53,127,000	\$209,601,000	1.73
corporate income surtaxes:	\$20,351,000	\$6,452,000	\$6,048,000	\$32,851,000	1.61
Reduction in the corporate tax rate:	\$214,275,000	\$67,935,000	\$63,676,000	\$345,885,000	1.61
Business income taxes:	\$233,654,000	\$74,079,000	\$69,434,000	\$377,166,000	1.61
Total:	\$1,365,384,000	\$409,765,000	\$534,073,000	\$2,309,220,000	1.69

Note: Totals may not sum due to rounding

Table 23: Impact on Employment, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	7,029	1,620	3,074	11,723	1.67
personal income surtaxes:	1,134	256	478	1,868	1.67
corporate income surtaxes:	146	44	55	245	1.67
Reduction in the corporate tax rate:	680	204	254	1,138	1.67
Business income taxes:	663	199	248	1,109	1.67
Total:	9,652	2,322	4,108	16,083	1.67

Note: Totals may not sum due to rounding

Table 24: Impact on Employment, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	7,115	1,639	3,112	11,866	1.67
personal income surtaxes:	1,148	259	484	1,890	1.67
corporate income surtaxes:	148	44	55	247	1.67
Reduction in the corporate tax rate:	1,554	466	580	2,601	1.67
Business income taxes:	1,694	509	633	2,836	1.67
Total:	11,658	2,917	4,864	19,439	1.67

Note: Totals may not sum due to rounding

Table 25: Impact on Labor Income, FY 2011-2012

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	\$226,217,000	\$69,284,000	\$105,391,000	\$400,892,000	1.77
personal income surtaxes:	\$34,993,000	\$10,939,000	\$16,382,000	\$62,314,000	1.77
corporate income surtaxes:	\$6,090,000	\$1,953,000	\$1,866,000	\$9,909,000	1.63
Reduction in the corporate tax rate:	\$28,351,000	\$9,091,000	\$8,685,000	\$46,127,000	1.63
Business income taxes:	\$27,637,000	\$8,862,000	\$8,467,000	\$44,966,000	1.63
Total:	\$323,288,000	\$100,129,000	\$140,791,000	\$564,208,000	1.75

Note: Totals may not sum due to rounding

Table 26: Impact on Labor Income, FY 2012-2013

	Direct	Indirect	Induced	Total	Multiplier
1-cent sales tax:	\$228,961,000	\$70,124,000	\$106,670,000	\$405,755,000	1.77
personal income surtaxes:	\$35,418,000	\$11,072,000	\$16,581,000	\$63,070,000	1.77
corporate income surtaxes:	\$6,153,000	\$1,973,000	\$1,885,000	\$10,011,000	1.63
Reduction in the corporate tax rate:	\$64,786,000	\$20,776,000	\$19,848,000	\$105,410,000	1.63
Business income taxes:	\$70,646,000	\$22,654,000	\$21,643,000	\$114,943,000	1.63
Total:	\$405,964,000	\$126,599,000	\$166,627,000	\$699,189,000	1.72

Note: Totals may not sum due to rounding

APPENDIX:

The following tables contain detailed information and descriptions utilized in the Corporate Income Surtax Expiration, Lower Corporate Income Tax, and Lower Business Income Models. In each model, we apportioned the tax savings to the top eight industry sectors contributing to North Carolina's gross state product (i.e. gross domestic product) using U.S. Bureau of Economic Analysis 2009 estimates. The categories included:

- Manufacturing
- Finance and insurance
- Real estate
- Health care and social assistance
- Professional and technical services
- Retail trade
- Wholesale trade
- Construction

Each category was then reconstructed in the IMPLAN model using a crosswalk table to transcribe these NAICS (North American Industrial Classification System) codes into IMPLAN sector codes. The tax savings was then apportioned to each of the IMPLAN sector codes comprising each of the eight categories. In the case of manufacturing, the potential IMPLAN sectors numbered 278 and were too cumbersome to model in their entirety. Therefore, the top 25 IMPLAN sectors comprising 50 percent of the state's manufacturing output were used in constructing the entire manufacturing sector.

Manufacturing		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
IMPLAN	Industry Sector	FY11-12	FY12-13	FY11-12	FY12-13	FY11-12	FY12-13
59	Animal (except poultry) slaughtering, rendering, and processing	\$386,385	\$390,382	\$1,798,691	\$4,110,341	\$1,753,390	\$4,482,071
60	Poultry processing	\$389,306	\$393,333	\$1,812,287	\$4,141,411	\$1,766,644	\$4,515,950
74	Tobacco product manufacturing	\$1,928,538	\$1,948,488	\$8,977,677	\$20,515,655	\$8,751,573	\$22,371,042
75	Fiber, yarn, and thread mills	\$267,651	\$270,420	\$1,245,964	\$2,847,258	\$1,214,584	\$3,104,757
76	Broadwoven fabric mills	\$141,103	\$142,562	\$656,857	\$1,501,040	\$640,314	\$1,636,791
80	Textile and fabric finishing mills	\$180,472	\$182,339	\$840,128	\$1,919,847	\$818,969	\$2,093,473
86	Apparel knitting mills	\$214,767	\$216,989	\$999,779	\$2,284,681	\$974,600	\$2,491,302
107	Paperboard container manufacturing	\$221,581	\$223,874	\$1,031,500	\$2,357,168	\$1,005,521	\$2,570,344
126	Other basic organic chemical manufacturing	\$170,896	\$172,664	\$795,549	\$1,817,976	\$775,513	\$1,982,390
127	Plastics material and resin manufacturing	\$159,257	\$160,904	\$741,366	\$1,694,160	\$722,695	\$1,847,375
129	Artificial and synthetic fibers and filaments manufacturing	\$198,366	\$200,418	\$923,427	\$2,110,201	\$900,170	\$2,301,043
131	Pesticide and other agricultural chemical manufacturing	\$165,833	\$167,548	\$771,980	\$1,764,116	\$752,537	\$1,923,659
133	Pharmaceutical preparation manufacturing	\$683,813	\$690,887	\$3,183,266	\$7,274,352	\$3,103,095	\$7,932,227
135	Biological product (except diagnostic) manufacturing	\$262,191	\$264,903	\$1,220,545	\$2,789,171	\$1,189,805	\$3,041,417
138	Soap and cleaning compound manufacturing	\$191,194	\$193,172	\$890,042	\$2,033,911	\$867,626	\$2,217,854
139	Toilet preparation manufacturing	\$193,794	\$195,799	\$902,146	\$2,061,571	\$879,426	\$2,248,015
149	Other plastics product manufacturing	\$167,675	\$169,409	\$780,555	\$1,783,712	\$760,896	\$1,945,026
150	Tire manufacturing	\$153,530	\$155,118	\$714,708	\$1,633,241	\$696,708	\$1,780,947
186	Plate work and fabricated structural product manufacturing	\$173,672	\$175,468	\$808,471	\$1,847,506	\$788,109	\$2,014,590
205	Construction machinery manufacturing	\$141,273	\$142,735	\$657,651	\$1,502,853	\$641,088	\$1,638,768
236	Computer terminals and other computer peripheral equipment manufacturing	\$399,526	\$403,659	\$1,859,863	\$4,250,132	\$1,813,022	\$4,634,503
272	Communication and energy wire and cable manufacturing	\$170,375	\$172,138	\$793,126	\$1,812,439	\$773,151	\$1,976,352
278	Heavy duty truck manufacturing	\$397,313	\$401,423	\$1,849,561	\$4,226,589	\$1,802,979	\$4,608,831
283	Motor vehicle parts manufacturing	\$393,258	\$397,326	\$1,830,684	\$4,183,451	\$1,784,578	\$4,561,793
296	Upholstered household furniture manufacturing	\$243,206	\$245,722	\$1,132,168	\$2,587,213	\$1,103,654	\$2,821,194
		\$7,994,975	\$8,077,682	\$37,217,989	\$85,049,997	\$36,280,647	\$92,741,714

Construction		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
IMPLAN	Industry Sector	FY11-12	FY12-13	FY11-12	FY12-13	FY11-12	FY12-13
34	Construction of new nonresidential commercial and health care structures	\$443,799	\$448,390	\$2,065,961	\$4,721,103	\$2,013,929	\$5,148,068
35	Construction of new nonresidential manufacturing structures	\$53,781	\$54,337	\$250,360	\$572,119	\$244,055	\$623,860
36	Construction of other new nonresidential structures	\$264,018	\$266,749	\$1,229,050	\$2,808,607	\$1,198,096	\$3,062,610
37	Construction of new residential permanent site single- and multi-family structures	\$487,174	\$492,214	\$2,267,879	\$5,182,523	\$2,210,762	\$5,651,218
38	Construction of other new residential structures	\$152,577	\$154,156	\$710,273	\$1,623,106	\$692,385	\$1,769,896
39	Maintenance and repair construction of nonresidential maintenance and repair	\$159,120	\$160,767	\$740,733	\$1,692,713	\$722,078	\$1,845,798
40	Maintenance and repair construction of residential structures	\$31,964	\$32,294	\$148,797	\$340,028	\$145,049	\$370,779
		\$1,592,434	\$1,608,907	\$7,413,053	\$16,940,198	\$7,226,354	\$18,472,229

Wholesale Trade		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
IMPLAN	Industry Sector	FY11-12	FY12-13	FY11-12	FY12-13	FY11-12	FY12-13
319	Wholesale trade	\$2,272,836	\$2,296,348	\$10,580,443	\$24,178,272	\$10,313,973	\$26,364,897
		\$2,272,836	\$2,296,348	\$10,580,443	\$24,178,272	\$10,313,973	\$26,364,897

Table A-4: Retail Trade Model in IMPLAN							
Retail Trade		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
320	Retail - Motor vehicle and parts	\$472,873	\$477,765	\$2,201,307	\$5,030,394	\$2,145,867	\$5,485,331
321	Retail - Furniture and home furnishings	\$116,000	\$117,200	\$540,001	\$1,234,002	\$526,401	\$1,345,602
322	Retail - Electronics and appliances	\$92,160	\$93,113	\$429,019	\$980,388	\$418,214	\$1,069,052
323	Retail - Building material and garden supply	\$258,402	\$261,075	\$1,202,904	\$2,748,859	\$1,172,609	\$2,997,460
324	Retail - Food and beverage	\$259,211	\$261,892	\$1,206,670	\$2,757,465	\$1,176,280	\$3,006,843
325	Retail - Health and personal care	\$168,041	\$169,780	\$782,261	\$1,787,611	\$762,560	\$1,949,278
326	Retail - Gasoline stations	\$148,379	\$149,914	\$690,729	\$1,578,443	\$673,332	\$1,721,193
327	Retail - Clothing and clothing accessories	\$145,588	\$147,094	\$677,737	\$1,548,754	\$660,668	\$1,688,819
328	Retail - Sporting goods, hobby, book and music	\$59,142	\$59,754	\$275,315	\$629,145	\$268,381	\$686,044
329	Retail - General merchandise	\$345,117	\$348,687	\$1,606,577	\$3,671,327	\$1,566,116	\$4,003,353
330	Retail - Miscellaneous	\$120,118	\$121,361	\$559,170	\$1,277,806	\$545,087	\$1,393,368
331	Retail - Nonstore	\$147,387	\$148,912	\$686,111	\$1,567,891	\$668,831	\$1,709,687
		\$2,332,416	\$2,356,545	\$10,857,801	\$24,812,085	\$10,584,345	\$27,056,031

Table A-5: Professional Services Model in IMPLAN							
Professional Services		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
367	Legal services	\$304,302	\$307,450	\$1,416,577	\$3,237,141	\$1,380,900	\$3,529,900
368	Accounting, tax preparation, bookkeeping, and payroll services	\$193,376	\$195,376	\$900,197	\$2,057,117	\$877,525	\$2,243,157
369	Architectural, engineering, and related services	\$364,336	\$368,105	\$1,696,045	\$3,875,777	\$1,653,330	\$4,226,293
370	Specialized design services	\$40,658	\$41,079	\$189,271	\$432,520	\$184,505	\$471,636
371	Custom computer programming services	\$238,555	\$241,023	\$1,110,515	\$2,537,732	\$1,082,546	\$2,767,239
372	Computer systems design services	\$142,992	\$144,471	\$665,653	\$1,521,140	\$648,888	\$1,658,709
373	Other computer related services, including facilities management	\$104,221	\$105,299	\$485,165	\$1,108,692	\$472,946	\$1,208,959
374	Management, scientific, and technical consulting services	\$324,123	\$327,476	\$1,508,848	\$3,447,998	\$1,470,848	\$3,759,826
375	Environmental and other technical consulting services	\$64,782	\$65,452	\$301,571	\$689,147	\$293,976	\$751,471
376	Scientific research and development services	\$249,133	\$251,710	\$1,159,756	\$2,650,256	\$1,130,547	\$2,889,939
377	Advertising and related services	\$115,914	\$117,113	\$539,598	\$1,233,080	\$526,008	\$1,344,597
378	Photographic services	\$23,281	\$23,522	\$108,379	\$247,666	\$105,649	\$270,064
379	Veterinary services	\$69,333	\$70,050	\$322,755	\$737,556	\$314,627	\$804,259
380	All other miscellaneous professional, scientific, and technical services	\$125,831	\$127,133	\$585,764	\$1,338,580	\$571,012	\$1,459,638
		\$2,360,835	\$2,385,258	\$10,990,095	\$25,114,401	\$10,713,307	\$27,385,687

Health Care		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
394	Offices of physicians, dentists, and other health practitioners	\$1,138,982	\$1,150,764	\$5,302,156	\$12,116,408	\$5,168,620	\$13,212,187
395	Home health care services	\$145,937	\$147,447	\$679,363	\$1,552,471	\$662,253	\$1,692,873
396	Medical and diagnostic labs and outpatient and other ambulatory care services	\$234,818	\$237,247	\$1,093,118	\$2,497,978	\$1,065,588	\$2,723,889
397	Hospitals	\$847,983	\$856,756	\$3,947,509	\$9,020,788	\$3,848,090	\$9,836,607
398	Nursing and residential care facilities	\$358,907	\$362,620	\$1,670,776	\$3,818,032	\$1,628,697	\$4,163,325
399	Child day care services	\$134,854	\$136,249	\$627,768	\$1,434,565	\$611,957	\$1,564,304
400	Individual and family services	\$136,041	\$137,448	\$633,294	\$1,447,193	\$617,344	\$1,578,074
401	Community food, housing, and other relief services, including rehabilitation services	\$53,371	\$53,923	\$248,451	\$567,756	\$242,194	\$619,103
		\$3,050,893	\$3,082,454	\$14,202,434	\$32,455,193	\$13,844,743	\$35,390,362

Real Estate		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
360	Real estate	\$3,965,040	\$4,006,057	\$18,457,944	\$42,179,819	\$17,993,077	\$45,994,461
362	Automotive equipment rental and leasing	\$195,756	\$197,781	\$911,276	\$2,082,434	\$888,325	\$2,270,764
363	General and consumer goods rental except video tapes and discs	\$82,064	\$82,913	\$382,023	\$872,993	\$372,402	\$951,945
364	Video tape and disc rental	\$35,854	\$36,225	\$166,905	\$381,410	\$162,702	\$415,904
365	Commercial and industrial machinery and equipment rental and leasing	\$195,733	\$197,758	\$911,169	\$2,082,191	\$888,221	\$2,270,499
366	Lessors of nonfinancial intangible assets	\$92,952	\$93,913	\$432,705	\$988,812	\$421,808	\$1,078,238
		\$4,567,397	\$4,614,646	\$21,262,022	\$48,587,659	\$20,726,534	\$52,981,810

Table A-8: Finance Model in IMPLAN							
Finance		Corporate Income Surtax		Lower Corporate Rate		Lower Business Income	
354	Monetary authorities and depository credit intermediation	\$2,137,252	\$2,159,362	\$9,949,278	\$22,735,942	\$9,698,703	\$24,792,126
355	Nondepository credit intermediation and related activities	\$496,984	\$502,126	\$2,313,548	\$5,286,885	\$2,255,281	\$5,765,018
356	Securities, commodity contracts, investments, and related activities	\$722,147	\$729,618	\$3,361,719	\$7,682,150	\$3,277,053	\$8,376,906
357	Insurance carriers	\$980,497	\$990,640	\$4,564,382	\$10,430,458	\$4,449,427	\$11,373,764
358	Insurance agencies, brokerages, and related activities	\$359,666	\$363,387	\$1,674,308	\$3,826,105	\$1,632,141	\$4,172,129
359	Funds, trusts, and other financial vehicles	\$131,666	\$133,028	\$612,928	\$1,400,655	\$597,492	\$1,527,327
		\$4,828,213	\$4,878,160	\$22,476,163	\$51,362,195	\$21,910,097	\$56,007,269