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A Consumed Tax Proposal for North Carolina

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Executive Summary

The roots of the debate over optimal tax regimes were sowed centuries ago. Since the beginning, the study of political economy centered on the first principles of tax policy and whether levies would be better applied to income or consumption. The argument from the start was almost always embedded in terms of equity and efficiency and drew disparate thinkers from Thomas Hobbes, John Stuart Mill and Irving Fisher on the consumption side and Adam Smith on the income side.

Interstate competition for investment and jobs has spurred several states to reform their tax system. Most continue to emphasize adjustments in personal income taxes but some states are strongly considering consumption taxes.

As an alternative to a flat tax the consumed tax, also known as cash flow personal expenditure taxes, allows a deduction for net savings. The consumed tax shares the same base as an income tax. A consumed tax system would broaden the base, by eliminating many exemptions, including those for non-wage compensation and benefits. The economic literature strongly suggests that consumed income tax would also eliminate distortions —that is to say, the decision to work or invest based on tax considerations. The additional benefits of a consumed tax include administration, equity and economic growth as capital formation expands.

Using its North Carolina State Tax Modeling Analysis Program (NC-STAMP) the Beacon Hill Institute at Suffolk University found that two consumed tax scenarios would be a major tax improvement to the state economy.

A consumed income tax rate of 6 percent could replace the current individual income tax, corporate income tax and estate and gift tax and cut the sales tax rate to 4.45 percent from 4.75 percent. BHI found that the tax change would:

- increase private employment by 9,900 jobs in 2013 and 13,700 in 2017;
- boost investment by over $1.9 billion in 2013 and $2.2 billion in 2017;
- raise real disposable income by $599 million in 2013 and $701 million in 2017; and
- boost state real gross domestic product by $4 billion in 2013 and $5.8 billion in 2017.

A consumed income tax rate of 9% could replace the current individual income tax, corporate income tax; estate and gift tax and sales tax. The larger tax change would:

- add an additional 80,500 private sector jobs in 2013 and 89,000 jobs in 2017;
- increase investment by a total of $3.6 billion in 2013 and $4.0. billion in 2017;
- increase real disposable income by $4.7 billion in 2013 and $5.1 billion in 217; and
- increase state real gross domestic product by $11.8 billion in 2013 and $12.9 billion in 2017.

Consumption taxation remains contentious because it is generally grounded on what a taxpayer consumes rather than his or her ability to pay, the fulcrum upon which

progressive taxation rest. But under certain conditions consumption taxes are actually more progressive. In the quest for capital formation and investment, a consumed tax provides greater incentives for savings and investment and thus growth over the long term.

Introduction

The roots of the debate over optimal tax regimes were sowed centuries ago. Since the beginning, the study of political economy attempted to determine whether the first principles of tax policy should rest on income or consumption. The argument from the start was almost always embedded in the terms of efficiency and equity.

According to one principle, taxes should be imposed on the taxpayer's income or wealth. According to the other, taxes should be imposed on the taxpayer's consumption. It is on this question – whether the taxpayers should pay according to their ability to pay, which is to say, according *to their ability* to consume, or whether they should pay according to what they *actually* consume.

The argument for taxing what a taxpayer actually consumes dates back at least to 1651, when Thomas Hobbes argued that "equality" in imposition of taxes requires "equality of that which is consumed, rather than in the riches of the persons that consume the same." Explaining why a consumption tax is thus superior to an income tax, Hobbes went on to ask:

> For what reason is there, that he which laboureth much, and sparing the fruits of his labour, consumeth little, should be more charged, than he that living idly, getteth little and spendeth all he gets; seeing the one hath no more protection from the commonwealth, than the other? But when the impositions, are laid upon those things which men consume, every man payeth equally for what he useth; nor is the commonwealth defrauded by the luxurious waste of private men.[1]

Writing 125 years later, Adam Smith reasoned differently:

> The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state. The expence of government to the individuals of a great nation, is like the expence of management to the joint tenants of a great estate who are all obliged to contribute in proportion to their respective interests in the estate. In the observation or neglect of this maxim consists, what is called the equality or inequality of taxation.[2]

For Hobbes it was a matter of principle that taxes be imposed on consumption, rather than on the fruits of a person's labor. For Smith, taxes imposed on "consumable commodities" were an expedient to which the state resorted when taxation according to "the revenue of its subjects" was impractical. The justification for this expedient lay

[1] See Hobbes (1962):. 254-55.
[2] See Smith (1937):. 777.

only in the presupposition that "in most cases" peoples' "expences" will "be nearly in proportion to their revenue."[3]

Since then economists have extended the Hobbesian and Smithean arguments. In more modern times, for example, Nicholas Kaldor, argued for the taxation of consumption, and Henry Simons, who argued for the taxation of income, defined as consumption plus an "accretion" to wealth.[4]

The debate carried on in another seminal work, *Blueprints for Basic Tax Reform,* published by the U.S. Treasury in 1977. The treasury department identified the choice as lying between the taxation of consumption on the one hand and the "comprehensive" taxation of income on the other.[5]

Consumption taxes and income taxes reward leisure and penalize work equally. Unlike income taxes, however, consumption taxes do not reward consumption and do not penalize saving. Therefore, it seems clear that a consumption tax would be superior to an income tax, provided that the consumption tax was crafted in such a fashion as to allay concerns about "ability to pay" or, in the parlance below, concerns about "vertical equity."

It is on the question of whether a consumption tax can be so crafted that the debate over consumption tax versus income tax must, for the most part, turn. There can be no principled debate over the question of whether discrimination against savers is *per se* an unattractive feature of the income tax. By any standard, this discrimination is not only inequitable but also has negative effects on economic activity. By penalizing saving, the income tax shrinks investment and hence production, productivity, and future well-being. However, a consumption tax removes these penalties and the economy responds with robust investment and growth.[6]

There is some empirical support in the economic literature tying consumption taxes to positive economic growth. In a study, economists Sabine Jokisch and Lawrence Kotlikofff used a life-cycle model to simulate the FairTax, a consumption tax. They found that, under the FairTax in an open economy such as the United States, national income would increase by 5.4 percent, capital stock would increase 12.8 percent, labor supply would increase by 2.6 percent and wages would increase by 2 percent over the current U.S. tax system.[7]

The Beacon Hill Institute (BHI) used a Computable General Equilibrium (CGE) model to study the economic effects of replacing the U.S. federal tax code with a pure consumption tax in the form of a national sales tax, or the FairTax. BHI found that after five years implementation a consumption tax would increase real Gross Domestic

[3] Ibid. p. 821.
[4] See Kaldor (1955) and Simons (1938).
[5] See archived copy of *Blueprints for Basic Tax Reform* from U.S. Treasury posted at http://www.treasury.gov/offices/tax-policy/library/blueprints.
[6] Alan J. Auerbach, "The Choice between Income and Consumption Taxes: A Primer," *NBER Working Paper* 12307. National Bureau of Economic Research (June 2006): 23, http://www,nberg.org/papers/w12307.
[7] Laurence J. Kotlikoff, and Sabine Jokisch, "Simulating the Dynamic Macroeconomic and Microeconomic Effects of the FairTax," *NBER Working Paper Series* 11858 (2005).

Product (GDP) by 10.7 percent, capital stock would increase by 9.3 percent, employment would rise by 9.9 percent and real wages would increase by 10.2 percent.[8]

Here we focus on the calculation of the applicable consumed income tax rate that would replace the largest North Carolina state taxes and the economic effects of implementing such a tax.

Fiscal and Economic Impacts of the Consumed Income Tax

BHI used its State Tax Analysis Modeling Program (STAMP) to determine the effects of the proposed tax changes on the North Carolina economy.[9] North Carolina-STAMP (NC-STAMP) is a five-year dynamic Computable General Equilibrium (CGE) model that simulates the economic effects of changes in taxes, costs (general and sector specific) and other "exogenous" changes. As such, it provides a mathematical description of the economic relationships among producers, households, governments and the rest of the world (ROTW).

NC-STAMP is general in the sense that it accounts for all the important markets, such as the capital and labor markets as well as flows. It is an equilibrium model because it assumes that demand equals supply in every market (goods and services, labor and capital). This equilibrium is achieved by allowing prices to adjust within the model. And it is computable because it can be used to generate numeric solutions to policy and tax changes.

The BHI simulated replacing the state corporate income tax, individual income tax, estate tax and sales tax. In simulating theses tax changes, BHI first calculated static revenue estimates using IRS data. We assumed these tax changes take place beginning in fiscal year 2013 and report the results for that year and 2017, five years after implementation.

Replacing the Individual and Corporate Income Taxes and the Estate Tax

When considering changes in tax revenue, a static change implies that all economic activity remains at the same levels that it was before the tax change. Although tax changes generate economic activity, thus influencing the actual revenues collected by government, we consider the static revenue these tax changes bring to assess whether the plan is revenue neutral, and to provide a baseline for comparison with the dynamic revenue changes estimated by the model.

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[8] David G. Tuerck, Jonathan Haughton, Paul Bachman, Alfonso Sanchez-Penalver, Phuong Viet Ngo, *A Distributional Analysis of Adopting the FairTax: A Comparison of the Current Tax System and the FairTax Plan*, (February 2007) http://www.beaconhill.org/FairTax2007/DistributionalAnalysisFairTaxBHI4-25-07.pdf

[9] For a description about the STAMP model see http://www.beaconhill.org/STAMP_Web_Brochure/STAMP_HowSTAMPworks.html.

Table 1 presents our static estimates of replacing North Carolina's corporate income, individual income and estate taxes with a consumed income tax. We estimate that the consumed income tax would need to replace $10.765 billion in revenue in 2011.[10]

We also calculate the tax base using the IRS data from North Carolina federal income returns.[11] We start with components of the federal Adjusted Gross Income for North Carolina taxpayers totaling $215.7 billion. We subtract 40% of the federal personal and dependent deductions, savings and education spending from the base, or $29.5 billion, which equates to $8,142 per North Carolina household.[12]

Table 1: Replacing Individual, Corporate and Estate Tax and Reducing Sales Tax Rate

Taxes to be replaced	**($)**
Individual Income Tax	9,523,508,427
Corporate Income Tax	1,193,554,339
Estate Tax	47,935,621
Total Taxes	**10,764,998,387**
Taxes with 6% rate	11,176,595,747
Available for Sales tax cut	-426,247,360
Federal AGI Components (IRS)	
Salaries and wages	154,772,816,000
Taxable interest	2,758,483,000
Ordinary dividends	3,911,040,000
Qualified dividends	2,963,939,000
State and local refunds	1,085,369,000
Business or profession net income	5,991,125,000
Net capital gain	5,264,291,000
Taxable individual retirement distributions	5,557,473,000
Taxable pensions and annuities	15,557,704,000
Unemployment compensation	3,898,256,000
Taxable social security benefits	5,651,897,000
Partnership/S-Corp net income	8,285,312,000
	215,697,705,000
Deductions (IRS)	
Federal personal and dependent exemptions (40%)	16,175,101,906
Charitable deduction	36,800,000
Education Savings Accounts	738,624,000

[10] North Carolina Department of Revenue "Statistical Abstract of North Carolina Taxes, Part III: State Tax Collections, Tables 5, 21, 23," http://www.dor.state.nc.us/publications/abstract/2011/part3.html. We do not inflate the numbers to 2013 because the tax revenues and tax base would be inflated by the same factor.
[11] Internal Revenue Service, Statistics of Income, Table 2: Individual Income and Tax Data, by State And Size of Adjusted Gross Income, Tax Year 2011, http://www.irs.gov/uac/SOI-Tax-Stats---Historic-Table-2.
[12] North Carolina Department of Revenue, "North Carolina Biennial Tax Expenditure Report," http://www.dor.state.nc.us/publications/nc_tax_expenditure_report_11.pdf, (2011):6, 60. See page 6 for charitable deduction and page 60 for Education Credit for Children with Disabilities.
State of North Carolina Department of Administration, Division of Non-public Education, "North Carolina Private School Statistics Information from the 2011-2012 School Year," (June, 2012) and General Assembly of North Carolina Session 2011 Legislative Fiscal Note, House Bill 4: Tax Fairness in Education, Internet http://www.ncleg.net/Sessions/2011/FiscalNotes/House/PDF/HFN0041v1.pdf, (April 13, 2011): 3.

Self-employed retirement plans	374,228,000
Individual retirement payments	285,907,000
Household Savings	11,911,222,870
Education Credit for children with disabilities	1,400,000
Total	**29,523,283,776**
Consumed Income Tax Base	**186,174,421,224**
Tax rate	**6%**
Total deductions per household	8,142

To estimate the value of education savings accounts, we multiply total private school enrollment of 96,000 for the 2011-2012 school year by average private school tuition in North Carolina of $7,694.

We estimate non-retirement savings by multiplying total U.S. Bureau of Economic Analysis value for disposable personal income in North Carolina, or $304.5 billion by the national savings rate of 4.2 percent.[13] We adjusted the North Carolina savings rate down to better reflect the state savings rate using the StateMaster.com, Nest Egg Index by State. We divided the national index by the North Carolina index.[14] We estimated total savings in North Carolina as $12.608 billion, but subtracted our retirement savings to arrive at a figure of $11.911 billion.

After adjusting the base for federal deductions, savings, education, charitable deduction and the child with disabilities deduction, we estimate the total consumed income tax base as $186.2 billion.

To calculate the static consumed income tax rate we divide the consumed income tax base by the taxes to be replaced and get a tax rate of 5.78%. The consumed income tax rate of 5.78% is lower than the rate for the lowest income tax bracket or 6%. If we round the consumed tax rate up to 6%, it would generate $426.3 million more in revenue that could be used to cut the sales tax rate.

We used the NC-STAMP model to estimate the sales tax cut that could be made with the 6% consumed income tax rate. The sales tax rate could be cut to 4.45% from its current rate of 4.75%.

The Economic Effects

The elimination of the North Carolina corporate income leads to a reduction in the after-tax burden on income derived from capital investments. This provides a powerful incentive for business owners inside North Carolina to invest in their businesses. Investment projects that may not have been profitable enough to justify the investment

[13] See line 35 in U.S. Bureau of Economic Analysis, "National Income and Product Accounts, Table 2.1: Personal Income and Its Disposition," http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1.

[14] StateMaster.com, "Nest Egg Index by State," http://www.statemaster.com/graph/eco_nes_egg_ind-economy-nest-egg-index.

when taking into account the franchise tax, now become more profitable on an after tax basis.

The North Carolina estate tax mirrors the federal estate tax, insofar as an estate tax return is required to be filed by the personal representative if a federal estate tax return is required to be filed with the Internal Revenue Service. The elimination of the estate tax relieves some of the state's family owned small businesses and farms from the tax and the potential hardship if such firms have little liquid assets to pay the tax. Moreover, the estate tax generates relatively little revenue for the state compared to the other taxes.

Now consider the North Carolina individual income tax. Assume that the individual income tax is paid by individuals working in the state, independently of where they reside. The income tax falls on the labor compensation for products and services rendered by companies and individuals in the state. The individual income tax also falls on the interest, dividends and capital gains earned on investments made by residents of the state, independently of where the source of those flows is located. This means that the individual income tax will fall on distribution of dividends and interests paid by state companies inasmuch as the stock and debt of those companies is owned by state residents.

Moving the North Carolina individual income tax to a consumed income tax relieves the tax burden on savings and investment, thus providing an incentive for households to increase savings and reduce consumption. A consumed income tax would also broaden the tax base relative to the current individual income tax base, because it removes many deductions and exemptions that currently narrow the tax base and require higher tax rates.

A consumed income tax would allow for a lower marginal rate as demonstrated in Table 1 above. The resulting effect on investment and capital formation would be limited to the portion of savings that would remain in North Carolina. The vast majority of the savings would leak out of North Carolina to the major stock and bond markets.

The individual income tax burden falls on the cost of production and service delivery for state businesses, as the cost of using labor increases. At the same time it decreases the incentive for state residents to save, the result of the tax on interest and capital gains. These two effects reduce the supply of labor and capital in the state and decrease total disposable income.

Table 2 displays the STAMP simulation results of replacing the personal, corporate and estate taxes with a consumed income tax and lower sales tax rates. In general, the adoption of a consumed income tax leads to improvement in the state economy. The change would create 9,900 jobs and boost investment by $1.9 billion in 2013. Real disposable income would rise by $599 million. The state's real Gross Domestic Product (GDP) would increase by $4 billion.

Table 2: Individual, Corporate and Estate Tax Economic Effects

Economic Variable	2013	2017
Employment (Jobs)	9,900	13,700
Percentage increase (%)	*0.3*	*0.4*
Investment ($ billions)	1.9	2.2
Percentage increase (%)	*2.7*	*2.8*
Real Disposable Income ($ millions)	599	701
Percentage increase (%)	*0.2*	*0.2*
Real Gross Domestic Product ($ billions)	4.0	5.8
Percentage increase (%)	*0.9*	*1.1*

Investment projects take time to plan and build, thus the full amount of new investment, employment and income spurred by switching to the consumed income tax, would take time to fully materialize. Therefore, we also report the effects for 2017 in Table 2. The change would create 13,700 jobs, helping to boost real disposable income by $701 million. Investment would increase by $2.2 billion in 2017 and real state GDP would increase by 5.8 billion.

Replacing Individual and Corporate Income, Estates, and Sales Taxes

Table 3 presents our static estimates of replacing North Carolina's corporate income, individual income, estate and sales taxes with a consumed income tax. We estimate that the consumed income tax would need to replace $16.790 billion in revenue in 2011.

Table 3: Individual & Corporate, Estate and Sales: 9% Rate

Taxes to be replaced	**($)**
Sales Tax	6,025,455,607
Individual Income Tax	9,523,508,427
Corporate Income Tax	1,193,554,339
Estate Tax	47,935,621
Total Taxes	**16,790,453,994**
Federal AGI Components (IRS)	
Salaries and wages	154,772,816,000
Taxable interest	2,758,483,000
Ordinary dividends	3,911,040,000
Qualified dividends	2,963,939,000
State and local refunds	1,085,369,000
Business or profession net income	5,991,125,000
Net capital gain	5,366,291,000
Taxable individual retirement distributions	5,557,473,000
Taxable pensions and annuities	15,557,704,000
Unemployment compensation	3,898,256,000
Taxable social security benefits	5,651,897,000
Partnership/S-Corp net income	8,285,312,000
Total	**215,697,705,000**
Deductions (IRS)	
Federal personal and dependent exemptions (40%)	16,175,101,906
Charitable deduction	36,800,000
Education Savings Accounts	738,624,000
Self-employed retirement plans	374,228,000
Individual retirement payments	285,907,000
Household Savings	11,911,222,870
Education Credit for children with disabilities	1,400,000
Total	**29,523,283,776**
Consumed Income Tax Base	**186,174,421,224**
Tax rate	**9.0%**
Total deductions per household	8,142

The calculation of the consumed income tax base and rate follow the method outlined in the previous section. A consumed income tax rate of 9.0% would yield enough revenue to replace the state sales, individual income, corporate income and estate taxes on a static basis.

The Economic Effects

The STAMP simulation indicates that replacing the largest state taxes in North Carolina would produce a substantial positive shock to the state economy. Table 4 displays our results.

The first economic indicator we consider is employment. The implementation of consumed income tax would create 80,500 jobs or 2.5% in 2013. The employment gains would help to boost real disposable income by $4.7 billion of 1.3% and investment by $3.61 billion or 5.1%. The combined effects would increase state GDP by $11.76 billion in 2013.

Investment projects take time to plan and build, and thus the full amount of new investment, the not to mention the accompanied employment and income spurred by abolishing the franchise tax would take time to fully materialize. Therefore, we also report the results for 2017. The change would increase employment 89,000 jobs or 2.7% helping to boost real disposable income by $5.1 billion, or 1.2%. Investment would increase by $4.0 billion or 5.2% in 2017and real state GDP would increase by $12.9 billion or 2.4%.

Table 4: Individual, Corporate and Estate Tax Economic Effects

Economic Variable	2013	2017
Employment (Jobs)	80,500	89,000
Percentage increase (%)	*2.5*	*2.7*
Investment ($ billions)	3.6	4.0
Percentage increase (%)	*5.1*	*5.2*
Real Disposable Income ($ millions)	4.7	5.1
Percentage increase (%)	*1.3*	*1.2*
Real Gross Domestic Product ($ billions)	11.8	12.9
Percentage increase (%)	*2.7*	*2.4*

Conclusion

The objective of any sound tax system is to raise revenue for government functions. We find that a consumed tax would raise approximately the same amount of revenue. A progressive income tax policy, that seeks to redistribute the burden upward, may indeed raise needed revenue for government, but it does so at a high cost to the

economy. An effective tax in the form of a consumed tax is far more efficient. A consumed tax would operate in the same manner as an IRA where income is accumulated and taxed only upon withdrawal. The economic benefits would be substantial. A consumed tax would be an excellent vehicle to drive capital formation and investment in North Carolina.

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The Beacon Hill Institute at Suffolk University in Boston focuses on federal, state and local economic policies as they affect citizens and businesses. The institute conducts research and educational programs to provide timely, concise and readable analyses that help voters, policymakers and opinion leaders understand today's leading public policy issues.

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