

**Testimony of [Michael P. Ettlinger](#),
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Economic Policy
Regarding House Bill 1668**

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Thank you for this opportunity to discuss the creation of a broad-based personal income tax in New Hampshire as proposed in House Bill 1668.

The Institute on Taxation and Economic Policy and the ITEP Tax Model

The [Institute on Taxation and Economic Policy](#) (ITEP) has engaged in research on tax issues since 1980. Since 1996 ITEP has used a *microsimulation tax model* to conduct research on federal, state, and local tax systems. A microsimulation model uses a large sample of tax returns and other data that is extrapolated to the year being analyzed. This is the type of tax model used by the U.S. Treasury Department, the Congressional Joint Committee on Taxation, the Congressional Budget Office, and many state revenue departments. A properly constructed microsimulation model can provide accurate estimates of revenue yield and tax incidence by income group.

ITEP's microsimulation model relies on one of the largest databases of tax returns and supplementary data in existence, encompassing close to 750,000 records (including 6,790 records for New Hampshire). Included in the sample are federal tax returns, with statistically valid samples from every state and the District of Columbia. A sampling of records from the U.S. Decennial Census five percent sample (which contains a random sample of five percent of all census forms received by the Census Bureau) are also included, and statistically matched with the tax return records. The data on the records is extrapolated to subsequent years using federal tax micro and tabular data, Census Bureau Current Population Survey micro and tabular data, and government and other widely respected macro data sources.

These, and other, data are used by the model's four modules: Personal Income Tax, Property Tax, Consumption Tax, and Business Tax. The modules calculate tax liability on a record-by-record basis and sum the results to provide revenue and tax incidence estimates. (A complete description and methodology for the ITEP model is available on request.)

The ITEP model has the unique capability of analyzing all major taxes for every state and the District of Columbia. In 1996, the ITEP model was used to produce the study *Who Pays? A Distributional Analysis of the Tax Systems in All 50 States*. This study was

released jointly with Citizens for Tax Justice. *Who Pays?* shows the distributional impact, by income level, of all major state and local taxes for each of the 50 states. It has been used by many state revenue departments and legislative fiscal offices.

ITEP often conducts research in individual states. This work has been primarily funded by private foundations. Recent major foundation-funded state studies include *Building a Better Arkansas Tax System* (1997) and *Tax Strategies for a Strong Minnesota* (1998). These studies were funded by the Winthrop Rockefeller Foundation and the Joyce Foundation, respectively.

In addition, ITEP has begun to do analyses on a contract basis. For example, ITEP was retained this year by the District of Columbia Tax Revision Commission to conduct revenue and incidence analysis of the current District of Columbia tax system and to help develop reform proposals. Last year ITEP was hired by the Maine Municipal Association to analyze a proposal the association developed for changes to Maine's tax system. Also last year, several labor unions in Oregon retained ITEP to analyze business taxes in that state.

Comparison of Recent ITEP Model Results with Actual and Predicted Revenues

The ITEP Personal Income Tax model reports revenues that are very close to actual revenues and state revenue departments' projections. In the personal income tax modeling work done by ITEP so far this year, model results for the District of Columbia, Minnesota, California and Maine have been within three percent of revenues or projections as reported by state officials. In addition, the ITEP estimate for the current New Hampshire narrow-based income tax (the interest and dividends tax) for 1998 is within one-half of one percent of the Department of Revenue Administration projection.

The ITEP model also produces results consistent with national projections from federal government estimators. In particular, the ITEP model produces results extremely close to the 1995 federal Internal Revenue Service tabular data for New Hampshire (1995 is the latest year for which this data is currently available). The ITEP model reports Adjusted Gross Income that is 1.6% higher than that reported by the IRS. ⁽¹⁾

New Hampshire's Current Tax System

It is beyond the scope of this testimony to do a complete analysis of the New Hampshire tax system. The following table, however, shows that New Hampshire, as with most states, has a regressive tax system--with middle- and lower-income taxpayers paying a higher share of their income in New Hampshire state and local taxes than better-off taxpayers. Generally speaking, consumption taxes (such as sales and excise taxes) are the

most regressive taxes, property taxes are somewhat regressive, and income taxes are progressive (or at least proportional). States that lack broad-based personal income taxes are generally among the most regressive tax states because they have no tax to balance their regressive consumption and property taxes. States that lack general sales taxes are generally among the least regressive.

New Hampshire is unusual in having neither a broad-based personal income tax nor a general sales tax. New Hampshire's tax system is more regressive than average, but is not among the ten most regressive (For more information, see the study *Who Pays?*, cited above).

New Hampshire State & Local Taxes in 1995							
Shares of Family Income for Non-elderly Married Couples							
					Top 20%		
Income Group	Lowest 20%	Second 20%	Middle 20%	Fourth 20%	Next 15%	Next 4%	Top 1%
Sales & Excise Taxes	2.3%	1.6%	1.3%	1.1%	0.8%	0.5%	0.3%
General Sales-Individuals	—	—	—	—	—	—	—
Other Sales & Excise-Ind.	1.9%	1.3%	1.1%	0.9%	0.7%	0.4%	0.2%
Sales & Excise on Business	0.4%	0.3%	0.2%	0.2%	0.2%	0.1%	0.1%
Property Taxes	6.6%	5.1%	4.6%	5.0%	4.6%	3.7%	2.6%
Property Taxes on Families	6.2%	4.9%	4.4%	4.8%	4.2%	3.0%	1.2%
Other Property Taxes	0.3%	0.2%	0.2%	0.3%	0.3%	0.7%	1.4%
Income Taxes	0.3%	0.2%	0.2%	0.3%	0.3%	0.5%	0.8%
Personal Income Tax	0.1%	0.0%	0.0%	0.0%	0.1%	0.3%	0.4%
Corporate Income Tax	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%
TOTAL TAXES	9.1%	6.9%	6.1%	6.4%	5.7%	4.8%	3.7%
Federal Deduction Offset	-0.1%	-0.2%	-0.4%	-0.8%	-1.0%	-0.9%	-0.5%
TOTAL AFTER OFFSET	9.0%	6.7%	5.7%	5.6%	4.7%	3.8%	3.2%

SOURCE: *Who Pays? A Distributional Analysis of the Tax Systems in All 50 States, 1996.*

House Bill 1668 Income Tax

House Bill 1668 would impose a four percent income tax on federal tax return Adjusted Gross Income (with modifications) less exemptions of \$10,000 per taxpayer (that is a total of \$10,000 for a single person, \$20,000 for a married couple) and \$4,000 per dependent. The income tax would be effective calendar year 1999. The exemption

amounts would be adjusted upward for inflation in succeeding years. House Bill 1668 repeals the narrow-based interest and dividend income tax.

We estimate the proposed broad-based income tax would generate revenue as indicated in the table.

Gross Revenue of the Income Tax Portion of HB 1668 (in thousands)	
1999	\$673,000
2000	\$713,000
2001	\$756,000
2002	\$801,000
<i>SOURCE: Institute on Taxation and Economic Policy, 1998.</i>	

In general, House Bill 1668 should impose taxes in New Hampshire more closely related to taxpayers' ability to pay. One problem often associated with property taxes is that they do not change as peoples' circumstances change. Thus, when people lose jobs or retire, for example, property taxes can create an onerous burden. Income taxes, on the other hand, are by definition closely related to current income. Hence, when circumstances change so does the tax burden.

Furthermore, as noted above, the property tax generally imposes higher burdens on low- and middle-income taxpayers than on the wealthy. For most middle-income families, a home represents most of their total wealth. For high-income families, however, homes are a small share of total wealth. Therefore, a property tax applies to more of the wealth of middle-income families than of higher-income families.

Comparing home value to incomes leads to a similar conclusion. Home value as a share of income declines at higher incomes. Thus, a typical middle-income family's home might be worth double the family's annual income, while a wealthier person's home is worth much less relative to their income.

Property tax on residential rental property passed on to renters in the form of higher rent also burdens middle- and lower-income taxpayers more than those at higher incomes.

For these reasons, House Bill 1668 would, by lowering property taxes and expanding the income tax, cause a modest shift in taxes from those who have fewer resources with which to pay taxes to those with greater resources. This would make New Hampshire's

overall tax burden much more proportionate to income and ability to pay than the current, almost exclusively property tax based, system.

Personal Income Taxes and the Economy

Some opponents of state income taxes claim that income taxes have an adverse effect on a state's economy. Although a thorough review of the data on this point is beyond the scope of this testimony, it is important to note that no significant relationship between economic performance and income tax rates has been found. In fact, most of the wealthiest and fastest growing states rely heavily on income taxes. Although New Hampshire has been doing well recently, the lack of an income tax did not prevent the state from being one of the hardest hit states in the last recession.

Comparison with Department of Revenue Administration Fiscal Note

The Department of Revenue Administration (DRA) has estimated substantially lower revenue than the ITEP model shows. ITEP estimates that if the income tax proposed in House bill 1668 were in place in 1998 it would raise \$623 million in total revenue. DRA estimates \$397 million.⁽²⁾ This is a \$226 million discrepancy. We have examined the DRA estimate and found that the discrepancy is primarily explained by an arithmetic error and the nature of the data used by DRA. Assumptions used in projecting the DRA revenue estimate are also partially responsible for the discrepancy.

DRA's Methodology

DRA's data source for its estimate is a table published by the federal Internal Revenue Service showing federal numbers of tax returns, Adjusted Gross Income (AGI) and numbers of exemptions (as well as other information) by broad AGI categories for tax year 1995 (a [copy of the DRA table](#) with this data is attached). DRA uses this data to calculate liability in 1995 and then projects to later years.⁽³⁾ In this calculation, DRA uses the exemptions as they would be in 1999 under House Bill 1668 (\$10,000 per taxpayer, \$4,000 per dependent). To facilitate comparison of the DRA results, independent of different projection assumptions, we ran the ITEP model at 1995 levels, also using the 1999 exemption levels. The ITEP model calculates that revenue from the proposed income tax would have been \$492 million in 1995. DRA calculates revenue of \$342 million in 1995. Thus, the difference is a substantial \$150 million.

Basic DRA Methodology

The starting point for determining taxable income in House Bill 1668 is very close to federal Adjusted Gross Income. Hence, the DRA estimate uses federal AGI as reported in the IRS table as its starting point (see line 6 on the attached table).

The next step is subtracting the exemption amounts. House Bill 1668 provides for substantially larger exemptions for taxpayers than dependents (\$10,000 versus \$4,000 in 1999). The IRS table, however, does not distinguish between exemptions for taxpayers and exemptions for dependents. Furthermore, the IRS table includes in its exemption line (line 2) an extra exemption for every elderly (and blind) taxpayer.⁽⁴⁾

Later in this testimony is a detailed discussion of how DRA attempts to circumvent these problems. For now, suffice it to say that DRA ends up with numbers of taxpayer exemptions and dependent exemptions for each income group (Lines 4 and 5 on the table).

Arithmetic Error

DRA makes a substantial arithmetic error in calculating the total dollar amount of exemption for each income group except for the under \$15,000 AGI group. The taxpayer exemption amount (line 7) should be calculated by multiplying the number of *taxpayer* exemptions (line 4) by \$10,000. Instead of using the number of *taxpayer* exemptions (line 4), however, DRA multiplies the *total* number of exemptions (line 2) by \$10,000 to arrive at its taxpayer exemption amount (line 7). In effect, the DRA estimate gives every taxpayer *and every dependent* a \$10,000 exemption, *plus* an additional \$4,000 exemption for each dependent.

Even assuming that the rest of DRA's methodology were correct, this error causes an understatement of revenue in the 1995 data year of \$95 million. Thus, of the \$150 million discrepancy between the DRA 1995 analysis and the ITEP 1995 analysis, \$95 million can be explained by a simple arithmetic error.

Errors Resulting From Use of Tabular Data

There are inherent problems in using the IRS tabular data in doing the type of revenue estimate attempted by DRA. The difficulties arise from the ways in which exemption amounts are calculated. The problems described below account for the rest of the 1995 revenue discrepancy.⁽⁵⁾

Overvaluing Total Exemption Amounts

To calculate revenue for each income group, DRA starts with total adjusted gross income for the group and subtracts its calculated total value of exemptions (lines 6 and 9). The problem with this approach is that many income tax filers in New Hampshire would not actually use their entire exemptions.

To show how this causes an underestimation of revenue, let's assume that in the \$15,000 to \$30,000 AGI group in the IRS table there were only two tax returns. There is a single person with \$30,000 in AGI⁽⁶⁾ and a married couple with a child and \$18,000 of AGI. DRA would start with \$48,000 in total AGI, which is correct. But DRA would then calculate that the dollar value of exemptions would be \$34,000 (\$10,000 for the single person, \$24,000 for the married couple with dependent child). DRA would then subtract this exemption amount from AGI to get \$14,000 of taxable income, multiply that by four percent and calculate \$560 of tax. Unfortunately, this is wrong. Although the married couple owes no tax (their exemptions exceed their income), the single person has tax of \$800 (\$30,000 of AGI, less \$10,000 exemption yields taxable income of \$20,000, multiplied by four percent results in \$800). Thus, the DRA method underestimates revenue, in this example, by 30 percent.

	Adjusted Gross Income (AGI)	Exemption Calculation	Taxable Income	Tax Liability
DRA				
Single Person	\$30,000	\$10,000	\$20,000	\$800
Married w/ 1 child	\$18,000	\$24,000	\$-6,000	\$-240
TOTAL	\$48,000	\$34,000	\$14,000	\$560
ITEP				
Single Person	\$30,000	\$10,000	\$20,000	\$800
Married w/ 1 child	\$18,000	\$18,000	\$0	\$0
TOTAL	\$48,000	\$28,000	\$20,000	\$800

This error happens because the married couple can only use \$18,000 of the \$24,000 of exemption they would otherwise be eligible for because they only have \$18,000 of income. Under the DRA methodology, the remaining \$6,000 of exemption, in effect, offsets income of the single person. In the real world, of course, tax filers who don't use all their exemption amount are not permitted to transfer it to others.

This flaw in the DRA estimate is a function of the use of tabular data that aggregates large numbers of tax returns. The microsimulation approach used by ITEP avoids this problem by basing its estimate on the sum of tax calculations for a large representative sample of New Hampshire taxpayers.

The clearest evidence that this problem is occurring is in the bottom, under \$15,000, AGI group. There are clearly taxpayers in this group. For example, a single person with

\$14,000 of income owes \$160 in tax (\$14,000 less \$10,000 exemption times four percent). The DOR analysis, however, shows zero tax (line 11) paid by the nearly 185,000 tax returns (line 1) in the group.

This problem is a major cause of the discrepancy between the DRA and ITEP revenue estimates.

Calculation of Numbers of Exemptions

There are also substantial problems in the way DRA calculated its number of exemptions and classified them as taxpayer or dependent exemptions. Again, these are primarily due to the nature of the data that DRA is working with.

As mentioned above, the IRS table that DRA relies on for its estimate supplies a total number of exemptions, but does not distinguish between exemptions for taxpayers and dependents. And the IRS table includes in its exemption line an extra exemption for every elderly (or blind) taxpayer. Because House Bill 1668 provides different exemption amounts for taxpayers and dependents (\$10,000 and \$4,000 respectively in 1999) and because no extra exemption is given for the elderly, adjustments to the IRS total exemptions line (line 2) are required.

DRA attempts to account for these discrepancies. First, DRA reduces the number of exemptions by 9.2 percent in every income group. (yielding line 3) We assume that this is an attempt to adjust for the elderly exemptions problem.⁽⁷⁾

Next, DRA attempts to determine how many of the exemptions are taxpayers and how many are dependents. Note that errors in this allocation do not affect the total number of exemptions but only affect the relative numbers of \$10,000 and \$4,000 exemptions that are assumed.

To make its allocation, DRA makes assumptions for each income group as to how many of the returns are married filing joint returns and how many are single returns. The number of taxpayer exemptions is calculated by taking the number of married returns assumed and multiplying it by two and adding the number of single returns (yielding line 4). The number of dependent exemptions (line 5) is calculated by taking the total number of exemptions (line 3) calculated and subtracting the number of taxpayer exemptions (line 4).

The problem with DRA's allocation of exemptions is that in all but the lowest income group, the percentage of returns that DRA assumed to be married appears to be substantially overstated. For example, DRA appears to assume that 75 percent of all returns in the \$15,000 to \$30,000 AGI group are married joint returns. The ITEP model shows 54 percent of returns in this group to be married. The latest New Hampshire specific IRS data shows this percentage to be 52 percent. Nationally, the IRS reports that

in 1994, 56 percent of returns in this group were joint married returns (no relevant IRS data is available for after 1994 at this time).

Since married returns get two taxpayer exemptions instead of one, overestimating the number of married returns yields higher total exemption amounts and a lower revenue estimate.

Border Issues and Differences Between Federal AGI and Proposed Tax Base

DRA reduces its revenue estimate by ten percent to account for New Hampshire taxpayers who are employed outside out-of-state and would therefore pay income taxes to states other than New Hampshire, and for differences between federal AGI and the proposed tax base (line 12). The ITEP model uses federal government data on interstate income flows to account for border issues and the tax base adjustments are built into the model. The ITEP equivalent to the adjustment DRA makes would be slightly less than ten percent, but this is not a significant contributor to the discrepancy.

Projecting From 1995

The discrepancy between the 1995 DRA and ITEP estimates is attributable to a simple arithmetic error, inherent problems with estimating revenue estimates from tabular data, and insufficient data. Even adjusting DRA's estimate up to ITEP's for 1995, however, the DRA estimate for 1998 would be different from ITEP's.⁽⁸⁾ To adjust its estimate to 1998, DRA increases its 1995 estimate by five percent per year (Lines 16 through 18). Applying this growth rate to a correct 1995 DRA estimate would yield a revenue estimate of \$570 million compared to the ITEP estimate of \$625 million. Although reasonable minds can differ on what an appropriate percent increase should be, this appears to us to be much too low.

In a single rate income tax system without substantial non-refundable credits, a five percent growth rate in tax revenue means that taxable income grows at five-percent per-year. But a five percent growth rate in taxable income implies that the underlying income, federal Adjusted Gross Income in this case, is growing at less than five percent per-year. The following example demonstrates how this is the case.

Under House Bill 1668, a single person with \$20,000 of AGI in 1995 would have taxable income of \$10,000 (\$20,000 of AGI less the \$10,000 exemption). At a five-percent growth rate, taxable income would go up by \$500 for this taxpayer in one year. This means that AGI would have had to go up by \$500 as well. So we now have \$20,500 in AGI, less the \$10,000 exemption yielding \$10,500 of taxable income. But note the growth rate this implies. Taxable income went up by five percent, from \$10,000 to

\$10,500. AGI, however, went up from \$20,000 to \$20,500 which is a growth rate of only two and a half percent.⁽⁹⁾

From 1994 to 1995 (the latest year for which this data is available) New Hampshire federal Adjusted Gross Income grew by 8.1 percent. From 1993 to 1994 the AGI growth rate was 5.2 percent. Thus, the DRA-implied AGI growth rate of significantly *less than* five percent for AGI (we roughly estimate it to be less than three percent) seems implausible. The ITEP model projects an average AGI growth rate from 1995 to 1998 of 5.9 percent. ITEP's projections beyond 1998 imply a slowing rate of AGI growth.⁽¹⁰⁾

Conclusion

The broad-based personal income tax in House Bill 1668 would raise substantial revenue in a manner that correlates tax burden with taxpayers' ability to pay. In conjunction with reductions in the property tax, New Hampshire's tax structure would approach overall progressivity.

We believe that the ITEP revenue estimate is more accurate than the DRA estimate. The DRA estimate includes a significant arithmetic error. In addition, the DRA estimate relies on federal IRS tabular data that is very difficult to use for revenue estimating purposes. Furthermore, the DRA uses, in our view, too small of a growth factor in projecting revenue.

Finally, we ask the Committee to note that nothing in this testimony should be taken as a critique of DRA beyond this particular estimate. Under time and work load pressures, anyone who has ever done revenue estimating has made arithmetic errors. In addition, by being limited to using IRS tabular data, DRA is making its estimate with one hand tied behind its back. Under these circumstances, an accurate estimate would have been extremely difficult.

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1. A comparison of tax liability is not readily available. The IRS table tax liability line includes the self-employment tax in addition to personal income tax liability. ITEP has only calculated the personal income tax liability.
 2. We do this comparison for 1998 because, although the DRA Fiscal Note does not indicate for what year the estimate is made, the spreadsheet printout supplied by DRA to the Legislative Budget Assistant indicates that the estimate is for 1998.
 3. Line numbers to assist in referencing this document have been added to the attached document.

4. Although federal tax law no longer grants an extra exemption to elderly or blind taxpayers, for purposes of this table the IRS imputes such exemptions. The IRS does this to maintain consistency in data reporting with tables produced in previous years when such exemptions existed.
5. The revenue impact of each one of the noted problems in exemption calculation is not given separately because interactions make isolating the impact of each problem impossible.
6. \$30,000 is used because it is a round number that makes subsequent calculations easy to follow. In fact, the \$15,000 to \$30,000 group includes only taxpayers with incomes up to \$29,999.99.
7. Although applying the same factor to every income level is obviously a crude adjustment, we have not had the opportunity to determine whether a more sophisticated approach would yield lower or higher revenue. Nor have we had the opportunity to determine whether 9.2 percent would be the appropriate average adjustment for all income groups.
8. DRA extrapolates its estimate to 1998 for the fiscal note even though the effective year for House Bill 1668 is 1999. ITEP did an estimate as if the bill were effective in 1998 and produces estimates for each year through 2002.
9. Note that this is not an extreme example. Using a married couple with one child and income of \$45,000 would have yielded an AGI growth rate of 2.3 percent, for example.
10. This reflects a reluctance to *assume* the national and New Hampshire economies will continue performing as well as it has been since 1995.