A Background Note on Recent Personal Income Tax Reductions in New Brunswick

Prepared for the New Brunswick Common Front for Social Justice

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Revised draft, 2 December 2012

1. Introduction

Recent years have seen substantial reductions in personal income tax rates in New Brunswick, particularly for those receiving higher incomes. These rate reductions have led to large revenue reductions, contributing importantly to the province's fiscal deficit. In this brief background note, I summarize an estimate of these revenue reductions as well as the potential effects of reversing those reductions, including the revenue effects of adding an additional top marginal tax rate as recently proposed by the New Brunswick Common Front for Social Justice (Edwards and Hill, 2012).

2. The rate reductions

Table 1 summarizes the relevant marginal Personal Income Tax (PIT) rates. The first column shows the actual tax brackets in 2009, which is the tax year for which the most complete data are available from the Canada Revenue Agency. Tax brackets for subsequent years are automatically adjusted for inflation. The second column shows what rates actually were for 2008. The 2009 budget of the Graham Liberal government began phased-in rate reductions that were scheduled to end in 2012 with the rates shown in the third column. Comparing 2008 rates with the planned 2012 rates makes it clear that the largest reductions in marginal rates were to take place at the highest income levels, hence the regressive nature of the tax reform.

The planned rate reductions were not fully implemented by the Alward Progressive Conservative government, as the fourth column shows. The Common Front's proposed tax rates (shown in the last column) are, with one exception, the rates that existed in 2008 before the New Brunswick tax reform. The exception is the Common Front's proposed top rate of 21%, which did not exist in 2008.

Table 1. ***Actual and Proposed New Brunswick Marginal Personal Income Tax Rates***

Taxable Income (2009 dollars and 2009 tax brackets)	Original 2008 marginal rates	Rates by 2012 in original tax reform plan	Actual 2012 Marginal Tax Rates	Common Front Proposed Marginal Rate Rates
$0-$35,707	10.12%	9%	9.1%	10.12%
$35,708 - $71,415	15.48%	12%	12.1%	15.48%
$71,416 - $116,105	16.8	12%	12.4%	16.8%
$116,106 - $149,999	17.95	12%	14.3%	17.95%
$150,000 + *	17.95	12%	14.3%	21.0%

* The new tax bracket proposed by the Common Front for Social Justice. For simplicity of comparison, the table shows what the marginal rate would have been had that bracket existed in 2008 and 2012.

3. Estimation of the revenue effects of the actual rate reductions
The estimates are based on Canada Revenue Agency tax return data for 2009. (See Final Table 2A, Taxable Returns by Total Income Class, file t02anb.csv for New Brunswick at www.cra-arc.gc.ca/gncy/stts/gb09/pst/fnl/dwnldf-eng.html.)

Table 2. ***New Brunswick Marginal Personal Income Tax Rates, 2008-2012***

Taxable Income (2009 dollars and 2009 tax brackets)	2008 marginal rates	2009 marginal rates	2010 marginal rates	2011 & 2012 marginal rates
$0-$35,707	10.12%	9.65%	9.3%	9.1%
$35,708 - $71,415	15.48%	14.5%	12.5%	12.1%
$71,416 - $116,105	16.8	16%	13.3%	12.4%
$116,106 - $149,999	17.95	17%	14.3%	14.3%

The actual marginal rates for each year between 2008 and 2012 are shown in Table 2. Using the 2009 data on taxable incomes, I have attempted to estimate the difference between what revenues would have been had the original 2008 rates remained in place and what revenues would have been with the lower rates between 2009 and 2012. All rates are applied to the same base: 2009 taxable income. This focusses on the effects of rate changes alone. Of course, actual income tax revenues from year to year depend on both the rates, but also on the general state of the economy that influences total taxable income. As well, because reductions in income tax rates increase disposable income, consumption expenditures on taxable goods may rise, increasing provincial revenues from those sources. Adjustments are made to the estimates to take these considerations into account, as described below.

I first calculated how much net income tax revenue would have been collected from each of the 19 income groups in the 2009 Canada Revenue Agency data if 2008 rates had remained in effect. [See the Appendix for details.] As shown in Table 3, the estimated income tax revenue is $1,335 million. This is $71m. more than actual 2009 revenues of $1,264m.

To find the income tax revenue effects of rate reductions in subsequent years, I estimated in a similar way the revenues that would have been received in 2009 with the tax rates that were in effect in those years (as shown in Table 2). The results for total income tax revenues are shown in Table 3 along with the differences between those revenues and the estimate of revenues without any rate reductions. For example, by 2011, the rate reductions led to a decline in PIT revenues of approximately $225 million (i.e., what revenues would have been in 2009 with 2008 tax rates: $1,332 million, less what revenues would have been with 2011 tax rates: $1,133 million). The four years of reduced tax rates resulted in a cumulative income tax revenue loss of $715 million according to this calculation.

This estimate omits a few things. One is some minor changes to the personal income tax rules concerning tuition rebates and the low-income seniors benefit. These have small revenue consequences (Ruggeri and Bourgeois, 2010, p.4). A second is the possible response of taxpayers to the lower income tax rates. In principle, the lower tax rates could have induced greater migration to the province (or less outmigration) and could have led taxpayers to produce (or declare) more taxable income. The calculation assumes that these responses are small enough that they would not change the overall result in a significant way. At the time that the tax reductions were put in place, the government offered no evidence for any significant response by taxpayers. In their study of the tax reform, Ruggeri and Bourgeois (2011, pp.12-14) point out why little significant additional revenues from such behavioural responses should be expected.

The third omission is the real growth of the tax base for reasons unrelated to the rate changes. Real personal income tax revenues grow along with growth in real incomes, all else equal. In the 2012 N.B. budget, the *2012-2013 Economic Outlook* document (p.9) reports or forecasts growth in nominal aggregate personal incomes of 3.4% (2010), 4.1% (2011) and 3.6% (2012). Using consumer price index data, inflation in 2010 was 2.4%, 2.3% in 2011 and I assume it will be 2% in 2012. That would give real growth in personal incomes growth of 1%, 1.8% and 1.6% for the years 2010 through 2012. However, the estimate for real growth in 2012 was reduced to 0.7% in the Department of Finance's *2012-2013 Second Quarter Report*.

Table 3. ***Estimate of New Brunswick Personal Income Tax Revenues and Net Revenue Reductions (millions of 2009 dollars, 2009 taxable incomes)***

	2008 marginal tax rates	2009 marginal tax rates	2010 marginal tax rates	2011 marginal tax rates	2012 marginal tax rates
Net PIT revenues in 2009	$1,335	$1,264	$1,141	$1,133	$1,133
PIT revenue reduction	---	$71	$194	$225	$225
Growth-adjusted PIT revenue reduction	---	$71	$196	$231	$233
HST revenue increase	---	$5	$14	$16	$16
Net revenue reduction	---	$66	$182	$215	$216
Growth-adjusted cumulative net revenue reduction	---	$66	$248	$463	$679

Source: author's calculations based on Canada Revenue Agency data and personal income growth estimates from New Brunswick Department of Finance annual *Economic Outlook* and (for 2012) the *2012-2013 Second Quarter Report*.

So the estimate of the growth-adjusted reduction in revenues for 2012 would be \$225 million (from the second row of Table 3) x (1.01) x (1.018) x (1.007) = \$233 million (2009 dollars), as shown in the 4th row in Table 3.

Finally, the feedback between income tax reductions and the province's share of HST revenues needs to be considered. I adopt the simple and extreme assumption that all of the increase in disposable income will be spent on taxable goods in New Brunswick.[1] This provides an upper bound on the increase in HST revenues that could have resulted from additional spending.

I conclude that the marginal tax rate reductions resulted in a total decline in provincial government revenues of about \$679 million (2009 dollars) during that four year period. Expressed in today's dollars that would be about \$725 million.[2] As Ruggeri and Bougeois (2010, p13) wrote, "this tax reform involves borrowing money to provide tax cuts that offer the greatest benefits to the wealthy". I have not attempted to add the interest cost that this additional borrowing has entailed, but it should rightly be included as part of the cost of the tax rate reductions.

4. The revenue effects of the New Brunswick Common Front for Social Justice personal income tax proposal

As summarized in Table 1, this is a proposal to reinstate the pre-tax reform rates of 2008 while adding an additional top marginal income tax rate of 21 percent for taxable incomes above \$150,000 (2009 dollars). Given inflation, that would correspond to about \$160,000 today.[3] This is the same marginal rate that was introduced in Nova Scotia in 2010 as a temporary deficit reduction measure.

Had this proposal been adopted for the 2012 tax year, I estimate that it would have added \$263 million to income tax revenues (in 2012 dollars, and adjusting the 2009 data for real growth, as described earlier). That is \$263 million in current dollars. That is almost three quarters of the currently projected deficit for 2012-2013 of \$357 million.[4]

The contribution of the new top bracket to income tax revenues is modest: about \$14 million. When HST feedback is included, the net effect of the new tax bracket would be about \$13 million.

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[1] In reality, some part of the increased disposable income will be spent on tax exempt or tax free goods, some will be spent outside New Brunswick, and part of it will be saved. Some of the savings will eventually be spent, however, generating some future HST revenues. In effect, these are treated here as if they are received in the current year. Additional HST revenue in 2009 dollars is the growth-adjusted change in income tax revenues (i.e., the change in disposable income) multiplied by 0.08/1.13

[2] \$679 m. x 1.0235 [2010 inflation] x 1.023 [2011 inflation] x 1.02 [assumed 2012 inflation] = \$725 million (2012 dollars).

[3] This is calculated from \$150,000 x 1.0235 [2010 inflation] x 1.023 [2011 inflation] x 1.02 [assumed 2012 inflation] = \$160,200 (2012 dollars).

[4] Minister of Finance, *Second Quarter Report*, November 2012.

5. Effects of the Common Front for Social Justice proposal on individuals in different income groups

The effects of the Common Front's proposal can be made more meaningful by showing what they mean for people in different income groups. Table 4 summarizes the estimates, again using the 2009 tax year, not adjusting for growth or inflation since then. Because this reverses the tax changes of recent years, the table also shows who received benefits from those tax reductions. (The effects of the proposed new top marginal tax rate are shown separately.)

Table 4. ***Estimated Change in Average Tax Rates and Average Income Tax Payments, by Pre-tax Income Categories, 2009 dollars, 2009 tax year data***

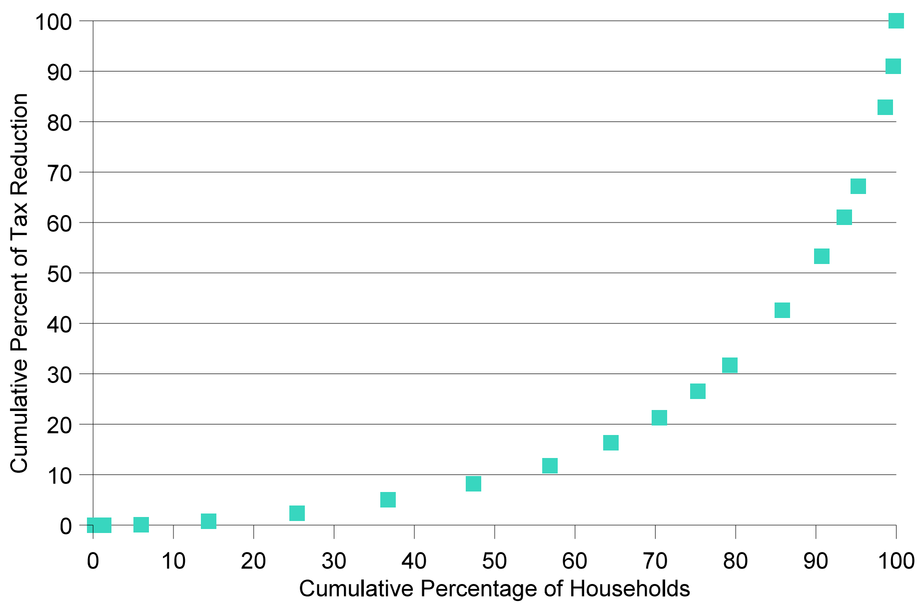
Income group (thousand of 2009 dollars)	Average N.B. net PIT rate, at 2012 marginal tax rates (percent)	Increase in average individual tax payments for filers with taxable returns	Increase in PIT, as percentage of average income in this income group	Additional revenues in 2009 tax year (millions of 2009 dollars)
0-5	1.0%	$4	0.1%	$0.0
5-10	0.5	$5	0.1	0.0
10-15	1.1	$16	0.1	0.3
15-20	2.2	$44	0.2	1.4
20-25	3.3	$84	0.4	3.7
25-30	4.2	$129	0.5	5.8
30-35	4.7	$172	0.5	7.3
35-40	5.2	$218	0.6	8.2
40-45	5.7	$338	0.8	10.2
45-50	6.0	$470	1.0	11.1
50-55	6.4	$607	1.2	11.7
55-60	6.7	$749	1.3	11.8
60-70	7.0	$960	1.5	24.6
70-80	7.5	$1,249	1.7	24.2
80-90	7.8	$1,567	1.9	17.6
90-100	7.9	$1,929	2.0	13.8
100-150	8.0	$2,721	2.3	35.2
150-250	8.6	$4,919 [$4,692]	2.7 [2.6]	19.3 [18.4]
250+	9.6	$19,162 [$12,172]	4.4 [2.8]	31.8 [20.2]
Total				$238.0 [$225]

Note: Values in brackets show the effect of omitting the proposed new top marginal rate. This shows the annual effect of the recent tax rate reductions for those income groups.
Source: author's calculations from 2009 Canada Revenue Agency data.
http://www.cra-arc.gc.ca/gncy/stts/gb09/pst/fnl/html/t02anb-eng.html

As shown in Table 4, the Common Front's proposed new top marginal tax rate has a significant effect on only those with incomes above $250,000, raising their income tax by about $7,000 per year, on average.

As noted earlier, the highest tax reductions (both in dollars and in percentage terms) went to those in the top income groups. About half of the tax reductions were received by the top 10 percent of taxpayers, those with taxable incomes of $80,000 and above. Within that group, those with taxable incomes greater than $250,000 – just 0.4 percent of taxpayers – received 9 percent of the total tax reduction. In contrast, the bottom half of taxpayers got only 10 percent of the total reduction. Figure 1 summarizes the skewed nature of the distribution of the tax reductions.

Figure 1
Who got the New Brunswick income tax reductions?



6. Conclusions

Ruggeri and Bougeois (2011, p.22) summed it up accurately: "The income tax reform introduced by the Government of New Brunswick in its 2009 Budget is *inequitable*, because it increases after-tax income disparities, *unsustainable*, because it is financed with borrowed funds, and *inefficient* because it will do little to stimulate economic growth." They called for "a rollback of the entire tax reform" (p.22). The Common Front for Social Justice is echoing this call, but also proposing a new top marginal rate. I hope that these estimates of the costs of the tax reductions and of the revenue effects of the Common Front's proposals will help to stimulate further public debate about personal income tax policy in New Brunswick.

Appendix: Estimating net tax revenues

Gross tax revenues for the average person in each income group are found by taking the amount of taxable income in that income bracket and multiplying by the corresponding marginal rate. For example: the individuals in the group with total incomes of $35,000-$40,000 had an average taxable income of $34,922. Applying the 2009 marginal tax rates, that gives a tax payment of $3,370. Multiplying by the number of people in that group (37,410) gives gross tax revenues of $126,072 thousand.

But a variety of tax credits reduce total tax payable. In this case, the net tax actually collected from this group was $77,288 thousand, a difference of $48,784 thousand, which must be the value of the tax credits. Most of these credits (but not all, e.g., some charitable donations) come from adding up various items (such as the Basic Personal Amount, Age Amount, Amounts for eligible dependents, etc.) and then applying the lowest marginal tax rate to that. That rate was 9.65% in 2009, so using the estimate of the tax credits divided by that marginal rate, $48,784/0.0965 gives $505,530 thousand. This is the estimated value of the items that gave rise to the tax credits for that group. Note that the value of tax credits in each year varies with the value of the lowest marginal tax rate.

Acknowledgements

I am grateful to Michel Deslierres for insightful comments on an earlier draft.

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