Equity Aspects of Sales Taxes and Income Taxes

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PRÉCIS

Cet article analyse les conséquences en terme d'équité verticale si on remplaçait l'ensemble des impôts fédéraux et provinciaux sur le revenu particuliers au Canada par une taxe de vente conjointe sur les produits et services dont le rendement serait identique. L'article fait l'estimation de l'incidence différentielle de chaque type d'impôt par catégorie de revenus en recourant à une base de micro-données pour 1986. Il examine également les effets qu'un crédit d'impôt pour TPS remboursable en fonction du revenu pourrait exercer pour atténuer les répercussions sur les ménages à faible revenu.

Les résultats montrent qu'un pareil changement augmenterait le fardeau fiscal de la classe à revenus moyens (25 000 $ à 55 000 $) ainsi que celui de la classe à revenus faibles. Avec l'actuel crédit pour TPS (augmenté pour tenir compte des revenus supérieurs), les ménages dont les revenus dépassent 55 000 $ bénéficieraient d'un gain de l'ordre de 10,2 milliards $ au détriment des foyers à revenu moyen et faible. De ce transfert, 82 pour cent (ou 8,3 milliards $) proviendraient de la classe à revenus moyens. Sans le crédit de taxe de vente, le gain de la classe à revenus supérieurs serait de 11,5 milliards $, dont 48 pour cent seraient financés par la classe à revenus moyens.

ABSTRACT

This paper analyzes the vertical equity implications of replacing the combined Canadian federal-provincial personal income taxes with an equal yield, joint goods and services sales tax. It estimates the differential incidence of each type of tax by income class, using detailed microdata for 1986. It also examines the effect of mitigating the impact on low-income households through an income-tested refundable GST credit.

The results show that such a change would increase the tax burden of the middle income class (between $25,000 and $55,000) as well as the low income class. With the current GST credit (enhanced to account for the higher revenue), households with income above $55,000 would gain $10.2 billion at the expense of middle- and low-income households.

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Fully 82 percent of this transfer, $8.3 billion, would be paid by the middle income class. With no sales tax credit, the upper income class would gain $11.5 billion, with 48 percent of that financed by the middle income class.

INTRODUCTION

The controversy created by the introduction of the goods and services tax (GST) in Canada brought to the fore the debate over the relative economic merits of sales tax and personal income tax (PIT). The comparison between the two taxes involves an evaluation of their impact in terms of economic efficiency and equity. In the GST debate, proponents stressed the efficiency arguments, while opponents emphasized the equity aspects. Those opposing the GST argued that such a tax would be regressive because it would increase the relative tax burden on low-income taxpayers; they argued that the revenue lost from the elimination of the manufacturers' sales tax (MST) would be recovered more equitably through the "progressive" income tax rather than through the "regressive" GST.[1] The supporters of the GST, on the other hand, argued that raising the PIT rates would hurt economic growth by increasing the disincentive to work, while the GST would improve economic efficiency by eliminating the economic distortions that had been created by the MST.[2]

The GST supporters conceded that the GST would impose higher tax burdens on low-income Canadians. As a corrective measure, a GST rebate targeted to low-income households was proposed. This credit was intended to maintain the GST burden on low-income Canadians at the MST level. There is, however, no consensus on the impact of this credit on the incidence of the sales tax.

In this paper we compare the incidence of a joint federal-provincial sales tax with the incidence of the combined personal income taxes in Canada for 1986. As an exercise in differential tax incidence, we first estimate the pattern of incidence of the combined federal-provincial PIT; we then replace the PIT with a joint federal-provincial GST at implicit rates that yield the same revenue net of transfer indexing. We used a provincial GST component, rather than the provincial retail sales taxes, to evaluate the equity implications of one of the proposals for reforming the

[1] See, for example, Neil Brooks, *Searching for an Alternative to the GST*, Discussion Paper no. 90 C.3 (Halifax: Institute for Research on Public Policy, 1990).

[2] These arguments are developed in the papers on sales tax reform prepared by the federal Department of Finance. See, for example, Canada, Department of Finance, *Tax Reform 1987: Sales Tax Reform* (Ottawa: the department, June 18, 1987). Estimates of the efficiency gain from replacing the MST with the GST are found in Bob Hamilton and Chun-Yan Kuo, "Reforming the Canadian Sales Tax System: A Regional General Equilibrium Analysis" (1991), vol. 39, no. 1 *Canadian Tax Journal* 113-30; a critical evaluation of those results is found in G.C. Ruggeri and D. Van Wart, "Overoptimism and the GST: A Critical Comment on the Hamilton and Kuo General Equilibrium Analysis" (1992), vol. 40, no. 1 *Canadian Tax Journal* 148-61.

existing system of federal and provincial general sales taxes, put forward by Mintz and Wilson.[3]

The debate on the equity aspects of sales and income taxes often focuses on the relative effects of the two taxes on the economic position of the low and high income classes. We show in this paper that this emphasis on "rich versus poor" is partly misplaced, because the equity implications of sales versus income taxes are particularly pronounced for the *middle* classes. The middle income groups have as much at stake as the other two groups in the policy debate over sales versus income taxes. Our analysis was performed within the framework of overall tax and fiscal incidence in Canada.[4] It is based on data for 1986 because that is the base year for Statistics Canada's social policy simulation database and model (SPSD/M), and that year provides the most reliable microdata available.

THEORETICAL ISSUES

Efficiency

When the two taxes are compared with respect to economic efficiency, the comparison usually involves two stylized structures: a general tax on all personal consumption, and a personal income tax applied to a comprehensive income base. Both taxes discriminate in favour of leisure and, therefore, create economic inefficiencies to the extent that they reduce the amount of labour supplied. If the PIT rate structure is progressive, this effect is stronger for high-income earners and weaker for low-income earners. In addition, the income tax, by reducing the net rate of interest received, discriminates in favour of current consumption and, therefore, creates additional inefficiencies by discouraging savings.[5]

In practice, neither tax conforms strictly to the stylized model. In Canada, the PIT provides favourable treatment to a variety of savings vehicles. Savings in the form of contributions to registered pension plans and registered retirement savings plans are deductible in computing taxable income; contributions to the Canada or Quebec Pension Plan are eligible for a federal non-refundable tax credit of 17 percent (plus the corresponding provincial credit); lifetime capital gains not exceeding $100,000 are exempt from taxation, and the excess is taxed at 75 percent of the statutory rate; gains on the sale of personal residences are entirely exempt from taxation. These features mitigate the adverse impact of the PIT on savings.

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[3] Jack Mintz and Thomas Wilson, "Alternatives to the Goods and Services Tax (October 1993), 14 *Policy Options* 40-43.

[4] For results for the tax system as a whole, see G.C. Ruggeri, D. Van Wart, and R. Howard, "The Redistributional Impact of Taxation in Canada" (1994), vol. 42, no. 2 *Canadian Tax Journal* 417-51.

[5] For a review of the issues, see Richard A. Musgrave, Peggy B. Musgrave, and Richard M. Bird, *Public Finance in Theory and Practice*, 1st Canadian ed. (Toronto: McGraw-Hill Ryerson, 1987).

On the consumption tax side, there are also a number of departures from the stylized model. First, the tax base does not include all personal consumption, since purchases of "necessities" are usually left untaxed (food and medicine under the GST; food, medicine, shelter, and clothing under provincial sales taxes). Second, business inputs are not entirely free from sales taxation. Therefore, there is implicit taxation of capital income under a sales tax. Siddiqi, Murty, and Diena[6] showed that in 1984 business purchases generated almost half of provincial and federal sales tax revenues. The GST did not entirely eliminate the federal tax on business inputs, because insurance and financial services are effectively taxed.

For a small open economy such as Canada's, the indirect sales tax on business purchases used in the production of tradable goods cannot be borne by capital (because of its mobility) or by consumers (because producer prices are determined in the world market). Therefore, this tax is shifted back to immobile factors of production, primarily labour. When we compare the PIT and general sales taxes in Canada (combined federal and provincial) in terms of economic efficiency, we are largely comparing the additional burden on a portion of savings under the PIT with the additional burden on labour earnings under a sales tax.[7] Both have a negative effect on economic growth—the former by reducing the supply of capital, and the latter by reducing the supply of labour.

Equity

With respect to fairness, the comparison of the two taxes involves both horizontal and vertical equity aspects—that is, the equal treatment of equals, and the equitable treatment of unequals.

Both taxes generate horizontal equity variations, but for different reasons. In the case of the personal income tax, horizontal inequities are mainly created by (1) differential tax rates on different types of income and (2) special tax credits. The first is illustrated when an individual working full time and earning minimum wages is compared with an individual on social assistance receiving the same money income; the former will pay the PIT and the latter will not. Similarly, a senior receiving investment income will pay PIT, while a senior receiving the same level of income from the guaranteed income supplement (GIS) will not. The second issue, special tax credits, is illustrated when a single senior is compared with a single, employed non-senior with equal income; the former pays less PIT because he or she benefits from special non-refundable credits for age and pension income.

In the case of consumption taxes, differences in the tax burden of people with equal incomes are due both to differing consumer behaviour

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[6] M.Y. Siddiqi, P.S.K. Murty, and J. Diena, "Highlights of the Provincial Sales Tax Commodity Allocation Project, 1984" (mimeograph, Statistics Canada, Input-Output Division, Ottawa, 1989).

[7] Of course, with a progressive PIT the total burden on labour income resulting from the labour-leisure tradeoff may be larger than under the sales tax.

and to the tax structure. The former affects the proportion of income spent, while the latter determines which goods and services are taxable. For example, of two individuals with equal disposable income and the same consumption pattern, the one who spends the smaller proportion of his or her income will bear the smaller sales tax burden. For a given level of consumption, a taxpayer who consumes more necessities will pay less sales tax than one who consumes more transportation, entertainment, furniture, or appliances.

With respect to vertical equity, there is general agreement among economists that the PIT is borne by income earners and has a progressive pattern of incidence.[8] Since the statutory rate structure contains higher nominal tax rates for higher income brackets, the effective tax rate tends to increase as a taxpayer's income rises. Empirical studies confirm the theoretical conclusion that the PIT is progressive, although they show that the degree of progressivity is highest at the low to middle end of the income scale.[9]

The agreement on the incidence of the PIT does not hold for sales taxes. As Musgrave explains,[10] the burden of general taxes on consumer expenditures is borne by consumers because those taxes increase the price of consumption relative to saving. Following this theoretical conclusion, economists have traditionally measured the incidence of sales taxes by assigning the sales tax burden in accordance with a taxpayer's share of consumption expenditures.[11] Since the ratio of consumer expenditures to income falls as income increases, this approach yields a regressive pattern of incidence. The degree of regressivity varies among sales taxes, depending on the extent to which "necessities" are excluded from the tax base.

The traditional approach to sales tax incidence has been criticized by Browning[12] on grounds that it ignores the indexing of government transfers to persons. In Canada, transfer payments, such as OAS and GIS, are indexed to increase in response to a rise in the consumer price index (CPI). Browning argues that, within the framework of differential tax incidence, real government expenditures (both purchases and transfers) must be kept constant, so that transfer payments cannot bear the burden of sales taxes, and the entire burden is borne by factor income. Since

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[8] Some local regressivity occurs for specific family types because of special taxes (clawbacks) on social benefits, such as unemployment insurance (UI) or old age security (OAS), in calculating the PIT liability.

[9] See, for example, D. Van Wart and G.C. Ruggeri, "Tax Reform and the Progressivity of the Personal Income Tax in Canada" (1991), vol. 46, no. 1 *Public Finance* 134-56; and Ruggeri, Van Wart, and Howard, supra footnote 4.

[10] Richard A. Musgrave, *The Theory of Public Finance* (New York: McGraw-Hill, 1959).

[11] See, for example, Joseph A. Pechman and Benjamim A. Okner, *Who Bears the Tax Burden?* (Washington, DC: Brookings Institute, 1974).

[12] Edgar K. Browning, "Tax Incidence, Indirect Taxes, and Transfers" (December 1985), 38 *National Tax Journal* 525-33.

transfers account for a decreasing share of total income as income increases, Browning derives a progressive pattern of sales tax incidence under the assumption that the savings ratio is constant.

A reconciliation between the traditional approach and Browning's alternative has been recently proposed by Ruggeri.[13] That analysis shows that the traditional approach and Browning's alternative can be treated as polar cases of a general formula. Whatever the actual degree of indexing, the former treats transfers as if they are not indexed at all, while the latter assumes that they are fully indexed. In the general formula, for a given set of tax shifting assumptions, transfers affect the pattern of incidence to the extent to which they are indexed, and the amount of indexing is treated as a negative tax. Ruggeri and Bluck have shown how, in the case of Canadian federal sales taxes, the pattern of sales tax incidence is affected by indexed transfers.[14]

EMPIRICAL RESULTS

Our estimates of the pattern of incidence of personal income taxes and sales taxes are part of a complete study of fiscal incidence in Canada for 1986.[15] Our measure of tax incidence is based on the effective tax rate, defined as the ratio of the net tax burden by the average taxpayer in a given income class to a comprehensive value of his or her income. This comprehensive concept of income is actual post-government income, defined as private income (cash plus accruals and imputations) plus transfer payments and the benefits of government purchases minus taxes paid.[16] In the table and graphs that summarize our results, the effective tax rate on comprehensive income is related to the average money income by income class. This presentation facilitates interpretation of the results in terms of the commonly available data on income and its distribution. The

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[13] G.C. Ruggeri, "On the Measurement of Sales Tax Incidence in the Presence of Transfers" (1993), 48 *Public Finance* 132-37.

[14] G.C. Ruggeri and K. Bluck, "On the Incidence of the Manufacturers' Sales Tax and the Goods and Services Tax" (December 1990), 16 *Canadian Public Policy* 359-73; and Giuseppe C. Ruggeri and Kelly A. Bluck, "The Treatment of Transfers in the Measurement of Sales Tax Incidence: The Case of Canada's Manufacturers' Sales Tax" (January 1992), 20 *Public Finance Quarterly* 24-46. See also James M. Poterba, "Is the Gasoline Tax Regressive?" in David Bradford, ed., *Tax Policy and the Economy*, vol. 5 (Cambridge, Mass.: National Bureau of Economic Research and MIT Press, 1991), 145-64, for a similar analysis on the incidence of gasoline taxes in the United States.

[15] See Ruggeri, Van Wart, and Howard, supra footnote 9, and G.C. Ruggeri, D. Van Wart, and R. Howard, "The Redistributional Impact of Government Expenditure in Canada" (mimeograph, Alberta Treasury, Edmonton, 1993). The analysis uses a consistent simulated microdatabase developed by Statistics Canada, the SPSD/M. For details, see Michael Bordt, Grant J. Cameron, Stephen F. Gribble, Brian D. Murphy, Geoff T. Rowe, and Michael C. Wolfson, "The Social Policy Simulation Database and Model: An Integrated Tool for Tax/Transfer Policy Analysis" (1990), vol. 38, no. 3 *Canadian Tax Journal* 48-65.

[16] A detailed discussion of this income concept and its theoretical foundation is found in G.C. Ruggeri, D. Van Wart, and R. Howard, *Measuring Tax Incidence Within the Framework of Fiscal Incidence*, Research Paper no. 93-4 (Edmonton: University of Alberta, Department of Economics, 1993).

general conclusions would not be altered if we showed the results by using the corresponding values of comprehensive income to define the income classes.

The sales tax in this paper is a fully harmonized joint federal-provincial GST. The tax was calculated by income class and household at the statutory rate for each of the 40 family expenditure categories used in the SPSD/M. This preliminary GST estimate was then adjusted, for each household, to take into account the indexing of government transfer payments to persons.[17]

Excluding Sales Tax Credit

A comparison of the incidence of personal income taxes with that of sales taxes (both with and without a credit) is shown in figure 1. Panel A illustrates the theoretical conclusion that the PIT is progressive. With a minor exception in the $150,000 to $175,000 income class,[18] the effective tax rate increases as income rises. Taxpayers with income below (above) approximately $42,500 pay below-average (above-average) effective tax rates. Overall, the PIT produces a redistribution of income from taxpayers with income above $42,500 to those with income below that level. In comparison, an equal revenue, joint federal-provincial GST generates an inverted U-shaped pattern of incidence. The hump in the middle of the distribution indicates that the middle class, very broadly defined to include income between $27,500 and $115,000, subsidizes both the poor and the rich. Under the PIT, there is a redistribution of income from taxpayers with above-average income to those with below-average income. Under the combined federal-provincial GST, the redistribution is from a broadly defined middle class, including both below- and above-average income groups, to the poor and the rich.

Figure 1, panel B, compares the two taxes directly by showing the difference in effective GST rates from the corresponding PIT rates. It shows, for the average taxpayer in each income class, which income classes would gain and which would lose if the combined federal-provincial PIT revenue were replaced by revenue from the joint GST. It is evident that the breakeven point is at an income of approximately $55,000, which is roughly 50 percent above the median family income in 1986. Taxpayers with incomes below $55,000 are worse off if the PIT is replaced by a GST of equal yield. Taxpayers with incomes above $55,000 are better off with a GST than with a PIT. When the PIT is replaced by a GST of equal yield, upper income classes gain at the expense of both the low and middle income classes. The redistributive losses from replacing the PIT with a joint GST are not confined to the low income classes but extend well beyond the average income.

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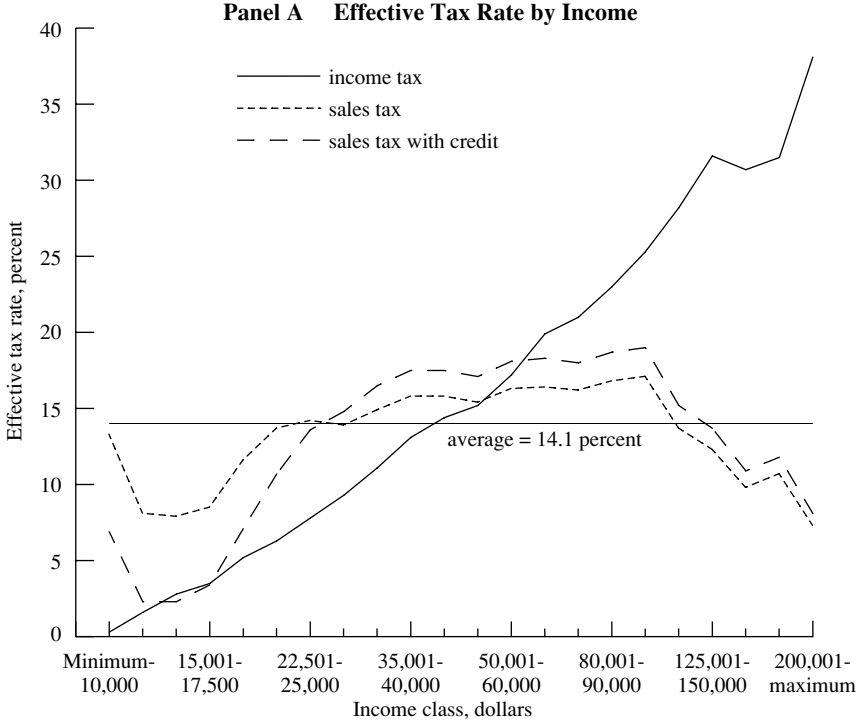
[17] For a detailed description, see Ruggeri and Bluck, supra footnote 14.

[18] This may be due to data problems. The SPSD/M data for high income earners are imputed from aggregate data and do not reflect the detailed tax information on income composition and deductions used for lower and middle income earners.

Figure 1 Comparison of the Incidence of the Personal Income Tax Versus an Equal Revenue, Joint Federal-Provincial GST

Panel A Effective Tax Rate by Income



Panel B Difference in Effective Tax Rate: Sales Tax Minus Income Tax

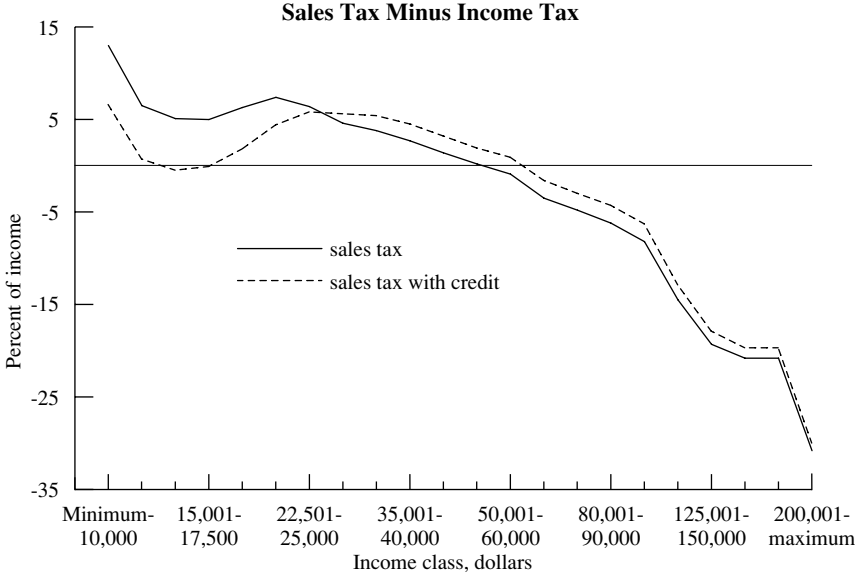


Table 1 Change in Tax Burden, by Income Class: Personal Income Tax Replaced with a Revenue Neutral GST

Income class, dollars	Difference in tax burden		Impact of credit
	GST without credit	GST with credit	
		millions of dollars	
Minimum-10,000	–3,601	–1,830	1,771
10,000-12,500	–939	–106	833
12,501-15,000	–699	67	765
15,001-17,500	–786	18	804
17,501-20,000	–905	–261	644
20,001-22,500	–1,106	–660	446
22,501-25,000	–988	–891	97
25,001-30,000	–1,460	–1,763	–303
30,001-35,000	–1,252	–1,795	–544
35,001-40,000	–922	–1,514	–592
40,001-45,000	–449	–1,003	–553
45,001-50,000	–66	–571	–505
50,001-60,000	461	–423	–884
60,001-70,000	1,206	572	–634
70,001-80,000	1,116	698	–419
80,001-90,000	792	553	–238
90,001-100,000	843	647	–196
100,001-125,000	1,845	1,651	–194
125,001-150,000	1,493	1,387	–106
150,001-175,000	1,025	971	–54
175,001-200,000	730	689	–41
200,001-maximum	3,659	3,562	–97
Net redistribution	0	0	0

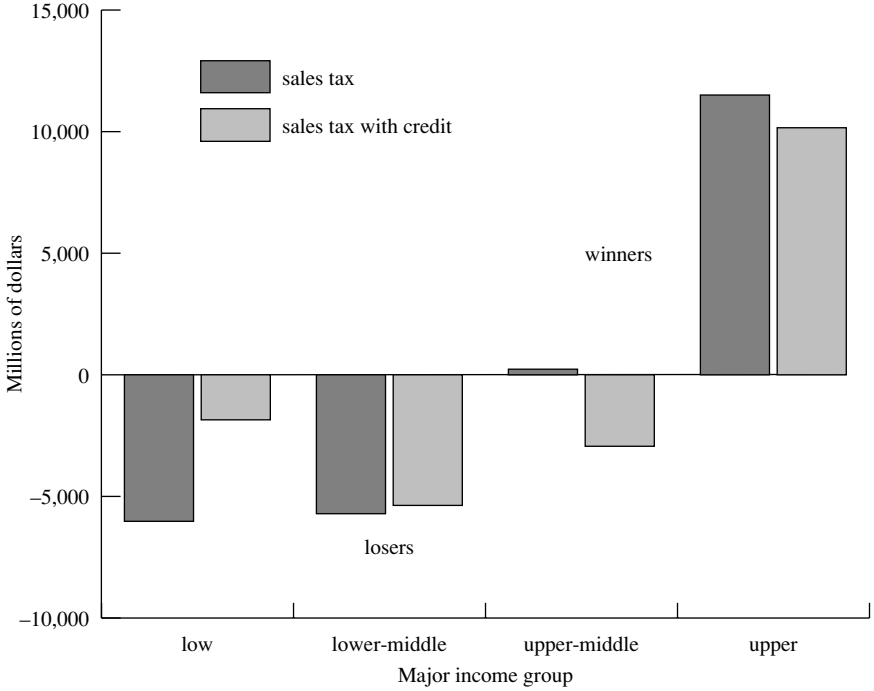
Source: Authors' calculations using SPSD/M, 1986 data.

Table 1 shows estimates of the gain or loss by income groups. In terms of absolute amounts of tax, the biggest losers are those in the bottom income class, followed by those with income between $25,000 and $35,000. The biggest gainers are taxpayers with income above $100,000.

Figure 2 shows the magnitude of the loss or gain for four major groups, identified as follows. First, we divided the distribution of taxpayers at the median income ($36,000). We then selected a value of 50 percent of the median income to mark the low-income cutoff, a procedure consistent with the approach used by the OECD and by Statistics Canada to estimate low-income lines. We divided the upper half of the income scale in a similar manner, at a level of income equal to twice the median. This approach, though somewhat arbitrary, maintains a certain degree of symmetry, as the dividing income levels are the median, twice the median, and one-half of the median. Taxpayers with income below the low-income threshold are identified as low-income. Taxpayers with income above the low-income threshold, but below the median, form the lower-middle income group. The upper half of the income scale contains the upper-middle group and the high income group.

If the 1986 combined federal-provincial PIT were replaced by an equal-yield joint GST, the low income group would see its tax burden increase

Figure 2 Winners and Losers from Replacing the Income Tax with a GST



by approximately $6.0 billion; an almost equal tax increase would be experienced by the lower-middle income group (approximately $5.7 billion, or 38 percent). The upper-middle income group is practically unaffected, but the high income group would gain approximately $11.5 billion (95 percent). The percent increase is defined as the difference between the GST and the PIT divided by the GST imposed on each group.

Effect of Sales Tax Credit

Recognition that sales taxes may impose a relatively heavier burden on low-income taxpayers has led to the suggestion that this burden can be reduced through the introduction of suitable tax credits, which can be delivered through the income tax systems or as a separate transfer payment. In Canada, a federal credit was introduced in 1986 to partly offset the effect on low-income taxpayers from the increase in the MST rate. Provincial sales tax credits have been available since at least 1984.

When it was introduced, the federal sales tax credit was $50 per adult and $25 for a dependent child. This refundable credit was reduced by 5 percent of family net income in excess of $15,000. The credit was estimated to be worth $300 million for 1986, and predicted to grow to $360

million by 1990. At that level, it would have offset just less than half of the 1 percentage point increase in the MST rate in 1986, and just over one-quarter in 1990. Almost 5 million families claimed MST credits in 1986. The credit was significantly enhanced when the federal sales tax rates were increased, so that in 1990 almost 6 million families claimed MST credits of $1 billion.

In our study, we calculated the sales tax credit on the basis of the federal GST credit, by households, with thresholds and levels deflated to 1986 dollars using the CPI. That GST credit was then adjusted to $6.3 billion to maintain the ratio of credit to revenue in 1986. In our simulation, the credit is financed by higher GST rates. The change in the pattern of incidence of the combined sales tax is, therefore, affected by the combination of the tax credit and higher rates, not by the credit alone.

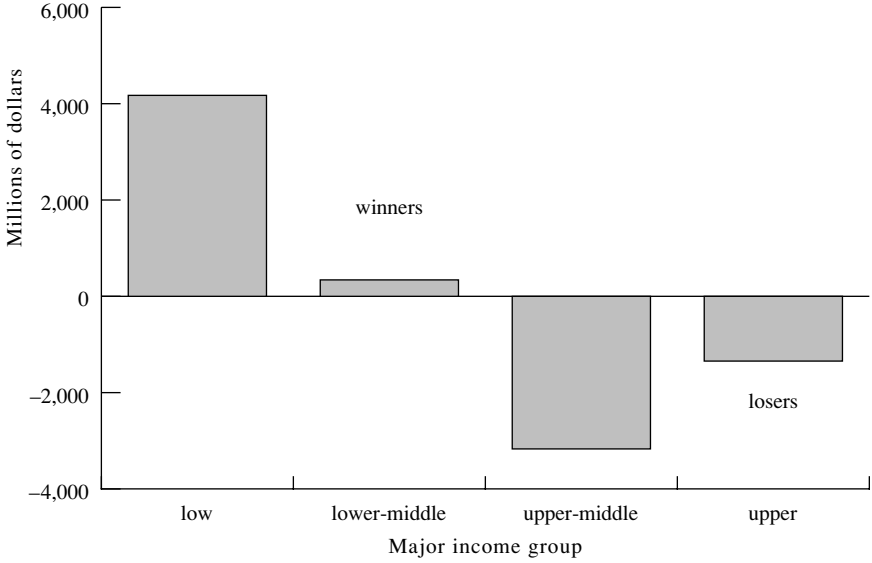
The gainers and losers, by income group, in total dollars, from the credit financed through a higher sales tax rate are shown in table 1. Figure 3, panel A, summarizes the results for the four income classes. The biggest gainer is the low income group, which experiences a net gain of approximately $4.2 billion. The biggest loser is the upper-middle group, which suffers a total loss of approximately $3.2 billion. When the loss is expressed as a percentage of income (panel B) it is roughly equal for the upper-middle and the upper income groups. Reducing the regressivity of sales taxes through an income-tested credit financed by a higher sales tax rate involves a transfer of resources from the broadly defined middle class to the low income class. If we want the transfer of income to be from the upper income class to the low income class, we must use a more direct method of transfer. A high-income surtax would be the most effective approach.

The comparison of the sales tax rates, including the credit, with the PIT is shown in figure 1. It is evident from the differences shown in panel B that the simulated credit eliminates the differential sales tax burden only for those low-income taxpayers with income ranging between $12,500 and $17,500. It reduces the tax burden for all other taxpayers with income below $25,000. Taxpayers with income above $25,000, particularly those in the upper-middle class, experience a higher tax burden in order to finance the credit.

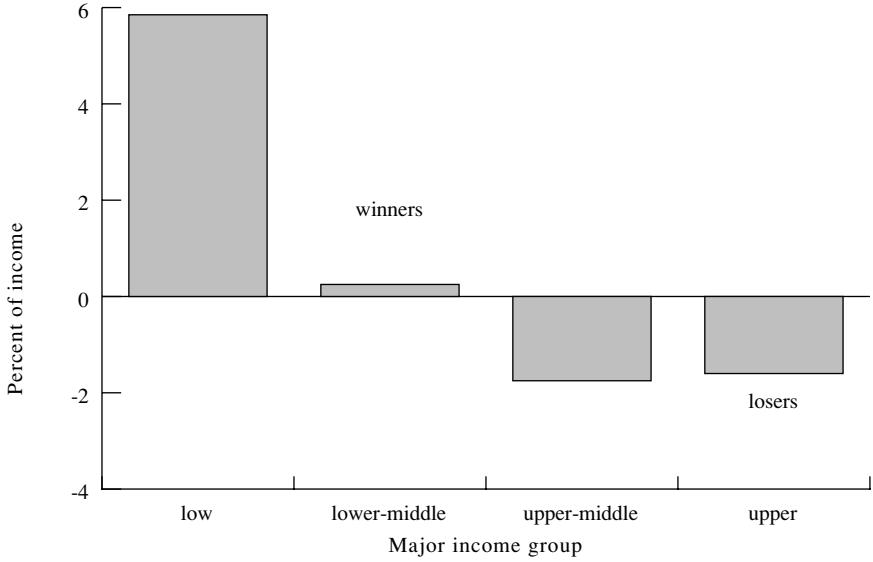
As shown in figure 2, the credit financed by a higher sales tax rate reduces the loss by the low income group by more than two-thirds, to approximately $1.9 billion. The loss by the lower-middle group is reduced slightly, to $5.4 from $5.7 billion. The upper-middle group becomes a substantial ($2.9 billion) loser, while the gain by the high income group is reduced by $1.3 billion. When the PIT is replaced by a sales tax with a low-income credit financed by a higher tax rate, the high income group is the only net gainer. Approximately 82 percent of the estimated $10.2 billion gain is financed by a transfer of income from the lower and upper-middle class to the high income class. A low-income sales tax credit financed by a higher sales tax rate thus affects the middle income class most severely.

Figure 3 Winners and Losers from a Tax Credit Financed by a Higher Sales Tax Rate

Panel A In Millions of Dollars



Panel B As a Percent of Income



CONCLUSION

In this study we compared personal income taxes with general sales taxes in terms of vertical equity. The comparison is based on 1986 data for Canada, and the results are derived by replacing the federal-provincial personal income tax revenue with an equal-yield, joint GST. The results show that such a change in the tax structure would increase the tax burden of the middle class and of the low income class. Households with income over $55,000 (50 percent above the median family income in 1986) would gain $10.2 billion at the expense of the middle- and low-income households ($11.5 billion without the sales tax credit). In terms of total dollars, the middle class (defined to include income between $25,000 and $55,000) would pay $8.3 billion, or 82 percent of the total amount transferred to taxpayers with income above $55,000. Without the sales tax credit, the transfer from the middle classes would be $5.5 billion, or 48 percent of the total, with a commensurate increase in the transfer from the lowest income group.

We also estimated the effect of cushioning the increased tax burden on the poor by introducing a special refundable sales tax credit. We took the GST credit that would have been paid in 1986 and added a parallel provincial credit calculated in the same manner. The sum of the two credits was distributed in accordance with the structure of the 1991 GST credit. The results show that the credit substantially reduces the differential tax burden of the sales tax on low-income households. The increase in the tax rate required to finance the credit, however, has the most impact on the middle income classes. Taxpayers with income between $25,000 and $55,000 finance 45 percent of the credit. From an equity perspective, the choice of a personal income tax and an equal-yield, joint GST involves a distributional conflict between the middle class and the high income classes, which is exacerbated when credits are used to shelter low-income taxpayers.