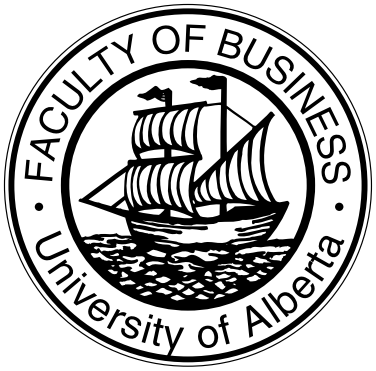
*NUMBER 43 • DECEMBER 1996*

# THE IMPACT OF SALES TAX HARMONIZATION ON THE ALBERTA ECONOMY AND ITS TAXPAYERS

*by Karen S. Davis*
*Senior Research Associate*

*Western Centre for Economic Research*
*Faculty of Business*
*University of Alberta*
*Edmonton*



## TABLE OF CONTENTS

## LIST OF TABLES

## Executive Summary

This research is about the impact on Alberta of the tax harmonization plan proposed by the federal finance minister in 1994. Alberta, having no provincial sales tax, occupies a unique position in negotiations about harmonization. A summary of the research findings follows.

1) The harmonization of provincial sales taxes with the federal Goods and Services Tax (GST) will be positive for Canada. There are two benefits to the national economy. First, through simplification of the sales tax environment; second, through reduction in the amount of sales tax embodied in capital goods, i.e. those goods which contribute significantly to improved productivity and living standards. The betterment in the competitive position of individual Canadian business firms will support higher output levels and longer term growth.

2) Benefits from harmonization of the GST and provincial sales taxes arise from two sources. The first, and *overwhelmingly most important benefit*, comes from harmonization of the tax **BASE**. The second, of lesser consequence, comes from adoption of a common tax **RATE**.

3) Not all provincial economies will be equally affected by harmonization. Direct benefits will be experienced by provinces with retail sales taxes. The most positive effects will be in those provinces where there is now much tax compounding, i.e. where a sales tax is levied on intermediate inputs used in the production of capital equipment or facilities.

4) The finance minister's goal was not only to secure harmonization of all provincial sales tax bases with the current GST base, but also to apply a uniform rate of 12% in every province. Obviously, insistence on harmonization in **both** base and rate produces an over-collection of sales tax revenues from Alberta. The minister's proposal provided for a return of incremental revenues to the Alberta Treasury as assurance of revenue neutrality.

5) The effects of harmonization on Alberta under these proposals requires separation of two effects. There is the short run impact as

Albertans encounter a market place increase in the GST rate from 7% to 12%. There are also long run impacts on Alberta from a nationally harmonized system.

6) The simulations employed indicate unfortunately that the **short run** impacts on Alberta are unfavourable even with abatement. In the short run, the increase in the GST rate to 12% affects the Alberta economy adversely because of tax induced price increases. The estimate is that Alberta's real Gross Domestic Product (GDP) will fall by up to half a percent, there will be job loss, and real wages (the purchasing power of employees) will fall by 1 to 2% depending on how wages respond to the decline in employment.

7) However, **the long run** effects may be quite different. It is entirely possible that the gains accruing to Canada as a whole from lower capital costs, higher output and enhanced growth will be sufficiently large to benefit Alberta. The potential for incremental longer term gains must be weighed against the short term adjustments imposed on Alberta by a sudden increase of 5% in the GST rate.

8) This research does not definitively address through simulations the long term consequences for Alberta of harmonization. However, we conclude that they depend (1) on the magnitude of the gains accruing to Canada as a whole, (2) on the distribution of those gains with respect to our interprovincial trading partners, and (3) on Alberta's ability to maintain its competitiveness vis-à-vis those provinces which benefit directly from harmonization. The weighing of these consequences becomes increasingly tenuous the further we look into the future.

9) It is well to reiterate that in our judgment **base harmonization** is the preponderant source of national benefits. The short run adverse consequences for Alberta arise exclusively from insistence on the application of a uniform sales tax rate, the benefits of which are marginal at best.

10) The study concludes that because **base harmonization** benefits are so dominant, the recommendation of the June 1994 Report of the House of Commons Finance Committee provides the most promising foundation for future federal-provincial negotiations on harmonization. The House Committee recommended base harmonization but rate flexibility for individual provinces. Canada is a federation. Base harmonization is a viable objective. That objective should not be eroded because of an insistence on both base and rate harmonization.

# PART I : INTRODUCTION

The current taxation system in Canada depends on a combination of inconsistent federal and provincial sales taxes. The federal government employs a multi-stage value added tax, the Goods and Services Tax (GST), applied to a broad base of goods and services. Eight provincial governments also have retail sales taxes (RST), applied to different bases at rates ranging from 7% in Manitoba and British Columbia to 12% in Newfoundland. The Quebec sales tax (QST) is partially harmonized with the GST and is therefore not strictly a RST. Alberta has no RST.

Existence of two levels of taxing authority with differing sales tax practices brings unique costs and complexities. For example, the Tourism Industry Association of Canada, in its submission to the 1994 Finance Committee hearings on sales tax reform, pointed out one unusual feature of the Canadian tax system:

> Depending on what you buy, I tax you either 0%, 5%, 7%, 8%, 12%, 15% or 17%, and it may be non-refundable, partially refundable, or totally refundable.[1]

Further, there is the example given by the Canadian Federation of Independent Business:

> ... You have books and newspapers GST taxable and RST exempt, subscription magazines RST exempt and GST taxable, and magazines at retail RST and GST taxable.[2]

The Canadian Institute of Chartered Accountants (1996) estimates that it costs Canadian businesses a minimum of $1.0 billion annually to comply with two levels of taxing authority using differing sales tax regimes. They also estimate that sales tax harmonization could result in administrative savings of $100 million to provincial governments, and compliance cost savings of $400 to $700 million for business.

The federal government has committed to reforming the GST and is proposing its harmonization with provincial retail sales taxes. Negotiations toward this goal have begun[3]. Alberta as the only province without a RST must address a different set of issues than the other provinces.

---

[1] Finance Committee (Canada), Replacing the GST - Options for Canada, June 1994, p. 18.

[2] Finance Committee (Canada), *Replacing the GST - Options for Canada*, June 1994, p. 18. GST refers to the federal Goods and Services Tax and RST to provincial retail sales taxes.

[3] On April 22, 1996, the federal government announced that it had reached agreement with three Atlantic provinces to harmonize their retail sales taxes (PSTs) with the GST. Newfoundland, New Brunswick and Nova Scotia will combine their PSTs with the GST at a rate of 15%, effective April 1997. The federal government has invited other provinces to join in this program. Any participating provinces which see their sales tax revenues fall by more than 5% as a result of

This report assesses the expected effects on the residents of Alberta from harmonization of federal and provincial sales taxes. Part II of the report provides a brief review of the current sales tax system in Canada and a comparison with other value-added tax systems. Part III offers an outline of the proposals for sales tax harmonization. Part IV raises some significant issues for Alberta created by introduction of a harmonized GST. Part V reports the estimated impact on Alberta of harmonization at a 12% uniform tax rate using the Western Centre's computable general equilibrium model.

---

harmonization are eligible for adjustment assistance from the federal government over a four year period. In the case of the three Atlantic provinces, combined assistance will total $960 million. This transfer will come from the federal government's general revenue fund. Were Saskatchewan, Manitoba and Prince Edward Island to join, additional adjustment assistance totalling $500 million would be required, bringing total payments to close to $1.5 billion. Alberta, British Columbia, Ontario and Quebec would not be eligible for assistance.

## PART II: THE CURRENT SALES TAX SYSTEM

### • The Goods and Services Tax - a description

The GST was introduced on January 1, 1991 to replace the seriously flawed Manufacturers' Sales Tax (MST), also referred to as the Federal Sales Tax. By removing taxation from the cost of exports it substantially improved Canada's international competitiveness.

The GST is applied to final goods and services at a rate of 7%. Unlike some of the provincial retail sales taxes and the old MST, business inputs are ultimately not taxed. The tax paid by businesses on inputs is subtracted from the tax collected on sales, and the net remitted to the government (or refunded if negative). Businesses with annual taxable sales of less than $30,000 are not required to collect the tax, and businesses with taxable sales of less than $200,000 can use an optional "quick method" to calculate their tax liability.

Items excluded from the tax base may be either *ZERO RATED* or *TAX EXEMPT.*

If *ZERO RATED,* tax is not collected and the seller is entitled to input tax credits so that the price of the product is unaffected by the GST. Basic groceries, most agricultural and fish products, prescription drugs and drug dispensing fees, medical devices, all exported goods and services, and international passenger and freight transportation services are zero-rated.

If *TAX EXEMPT*, the GST is not added to the sale price of the item. But input tax credits are not available to the seller. Hence, although no tax is collected at sale, the price does incorporate whatever GST may have been paid during the production process. Key tax exempt items include the sale of used housing; long term residential rents; most health, medical and dental services; child care; legal aid; most education services; financial services; insurance services; and some supplies by charities, non-profit organizations, governments and other public sector organizations.

Individuals pay GST on new housing, but receive a partial rebate based on the price of the house.[4] Rebates are also available to public service organizations (specifically the "MUSH" sector: municipalities, universities, schools and hospitals; and charities and government-funded non-profit organizations) for a portion of the tax paid on their inputs.[5] The public service rebates were intended

[4] New homes costing more than $450,000 are fully taxable, while those costing less than $350,000 are entitled to a rebate of 2.5 percentage points, for an effective rate of 4.5%. The rebate for homes costing between $350,000 and $450,000 is gradually phased out.

[5] Municipalities receive a rebate of 57.14% (corresponding to an effective GST rate of 3.0%).

to ensure that the tax burden of these organizations was not raised by the replacement of the federal sales tax with the GST.

Low income families receive sales tax relief in the form of a GST credit. The credit amounts to $199 per year for adults and $105 for children, reduced by 5% of family income in excess of $25,921 per year. The credit benefits single adults with annual incomes below $30,000, and families with incomes below $35,000.

Net collections from the GST in 1993-94 were about $16 billion, after refunds and rebates of about $13 billion, GST credits of $2.7 billion and federal remissions of $933 million.

**Table 1: Gross and Net Collections of Goods and Services Tax from Canada:**
**Fiscal Year 1993-1994**

| | ***$ million*** |
|---|---|
| Gross Collections | 32,652 |
| Less: | |
| Refunds and credits | 13,338 |
| GST tax credits | 2,685 |
| Remission of GST | 933 |
| Net Collections | 15,696 |

Source: Canadian Tax Foundation, *The Finances of the Nation, 1995*, p. 5:2; and Department of Finance (Canada), *Tax Expenditures*, December 1994, p. 42. (UPDATE refunds and credits split?)

## • Alberta and the GST

The National Accounts and Environment Division of Statistics Canada estimates that a net of about $2 billion in GST revenue was collected from residents of Alberta in the 1994 tax year.[6] This is after accounting for input tax credits and MUSH and housing rebates, but before the low income GST credits. Referring to Table 3, Albertans received $236 million in GST credits in 1993 (1994 data is not yet available), 8.6% of the total given out to low and modest income Canadians. Adjusting for the estimated GST credit brings net collections to about $1.7 billion.

Universities receive a rebate of 67.0% (2.31% rate), schools receive 68.0% (2.24% rate), hospitals 83% (1.19% rate), and registered charities and government-funded non-profit organizations 50% (3.5% rate).

[6] Gross estimates of GST remissions by province are not available because of cross-border transactions relating to business input tax credits.

**Table 2: Net Collections of Goods and Services Tax from Alberta: 1994 Tax Year, estimated**

| | *$ millions* |
|---|---|
| Collections before rebates | 2,107 |
| Less: MUSH, non-profit, and charities rebates | 130 |
| Net collections before GST Credit | 1,977 |
| Less: GST Credit * | 236 |
| Net collections | 1,741 |
| *Share of Canada's net collections (approx.)* | *11%* |

* GST credit is for 1993 tax year.
Source: Net collections before GST Credit are from the National Accounts Division of Statistics Canada. GST Credit for Albertans was obtained from Revenue Canada (unpublished data). Rebates were estimated using data on Alberta's share of Canadian GDP at factor cost for the education and health sectors.

**Table 3: GST Credit for Low and Modest Income Persons, 1993 Tax Year**

| | *Number of Registrants* | *Amount $000s* |
|---|---|---|
| Alberta | 698,250 | 235,973 |
| Canada | 8,319,860 | 2,739,944 |
| Alberta's share | 8.4% | 8.6% |

Source: Revenue Canada Tax Statistics on Individuals - 1993 Tax Year. Provincial data unpublished.

The National Accounts and Environment Division Of Statistics Canada allocates GST collections by component of gross domestic product, as found in Table 4 below. The figures represent the tax portion in the price of each commodity and can be loosely interpreted as an effective tax rate. From the table, net GST collections before credits represented 2.4% of Alberta GDP in 1994. For comparison, Clancy and Smith (1991) estimated that GST collections comprised 2.9% of Canadian GDP in the first quarter of 1991.

The detail in Table 4 illustrates two points. First, there is significant variation in the tax portion of various goods and services because of numerous exclusions and exemptions from the tax base. The effective tax rate on personal consumption is only half the GST rate itself. The second point is that although exports and business investment are intended to be free of GST, small amounts of GST are allocated to these components because of tax cascading, i.e. the 'pass

through' of the tax on intermediate transactions. To reiterate, the price of tax exempt products includes any GST paid during the production process. In this way the tax cascades into the prices of other sectors, including exports and business investment. Much cascading stems from the exemption of financial services.

**Table 4: GST Compared to Components of GDP**
**Alberta, 1994**
(Millions of dollars)

| | *GST* | *GDP* | *GST/GDP (%)* |
|---|---|---|---|
| **Personal Expenditure - Total** | **1554** | **43895** | **3.6** |
| **Durable Goods** | **399** | **6236** | **6.4** |
| Furniture, Carpets and other Floor Coverings | 31 | 499 | 6.2 |
| Household appliances | 42 | 651 | 6.5 |
| New and used motor vehicles | 142 | 2213 | 6.4 |
| Motor vehicle repairs and parts | 63 | 995 | 6.3 |
| Recreation, sporting and camping equipment | 105 | 1625 | 6.5 |
| Jewelry, watches and repairs | 16 | 253 | 6.3 |
| **Semi-durable goods** | **268** | **4216** | **6.4** |
| Men' s and Boys ' Clothing | 55 | 859 | 6.4 |
| Women's and Children's clothing | 71 | 1118 | 6.4 |
| Footwear and repair | 22 | 347 | 6.3 |
| Other Clothing supplies | 8 | 140 | 5.7 |
| Reading and entertainment supplies | 50 | 786 | 6.4 |
| Semi-durable household furnishings | 62 | 966 | 6.4 |
| **Non-durable goods** | **394** | **10919** | **3.6** |
| Food and non-alcoholic beverages | 25 | 4441 | 0.6 |
| Alcoholic Beverages | 67 | 1049 | 6.4 |
| Tobacco Products | 49 | 918 | 5.3 |
| Electricity | 42 | 642 | 6.5 |
| Natural Gas | 48 | 730 | 6.6 |
| Other Fuels | 3 | 49 | 6.1 |
| Non-durable household supplies | 46 | 718 | 6.4 |
| Drug & Drug Sundries | 11 | 729 | 1.5 |
| Motor Fuels & Lubricants | 80 | 1286 | 6.2 |
| Cosmetics & Toiletries | 23 | 357 | 6.4 |
| **Services** | **493** | **22524** | **2.2** |
| Gross, Imputed Rent | 30 | 6064 | 0.5 |
| Gross, Paid Rent - | 10 | 2222 | 0.4 |
| Other lodging | 0 | 133 | 0 |
| Water Charges | 0 | 354 | 0 |
| Domestic and Child care services | 0 | 375 | 0 |
| Laundry & Dry Cleaning | 8 | 123 | 6.5 |
| Other household services | 3 | 185 | 1.6 |
| Medical care | 0 | 722 | 0 |
| Hospital Care & The Like | 0 | 156 | 0 |
| Other medical care expenses | 0 | 100 | 0 |
| Other auto-related expenses | 11 | 268 | 4.1 |
| Purchased Transportation | 34 | 1110 | 3.1 |
| Communications | 51 | 778 | 6.6 |

| | | | |
|---|---|---|---|
| Recreational services | 61 | 1311 | 4.7 |
| Educational and cultural services | 2 | 1085 | 0.2 |
| Personal Care | 11 | 294 | 3.7 |
| Expenditure on restaurants and hotels | 171 | 3134 | 5.5 |
| Financial and Legal services | 79 | 2511 | 3.1 |
| Other services | 9 | 589 | 1.5 |
| Operating expenses of Non-profit organizations | 5 | 736 | 0.7 |
| Net expenditure abroad | 8 | 274 | 2.9 |
| **Government Spending on Goods and Services *** | 60 | 13607 | 0.4 |
| **Government Investment** | | | |
| Fixed Capital | | 1728 | |
| Construction | | 1417 | |
| Machinery and Equipment | | 311 | |
| Inventories | | - | |
| **Business Investment** | 243 | 16851 | 1.4 |
| Fixed capital | 243 | 16565 | 1.5 |
| Residential construction | 236 | 4393 | 5.4 |
| Non-residential construction | 3 | 7596 | 0.0 |
| Machinery and equipment | 4 | 4576 | 0.1 |
| Inventories | 0 | 286 | 0.0 |
| Non-farm | | 203 | 0.0 |
| Farm and grain in commercial channels | 0 | 83 | 0.0 |
| **Exports of goods and services** | | 47216 | |
| Interprovincial | | 21446 | |
| Merchandise | | 14013 | |
| Non-merchandise | | 7433 | |
| International | 63 | 25770 | |
| Merchandise | 21 | 23502 | 0.1 |
| Non-merchandise | 42 | 2268 | 1.9 |
| **Imports of goods and services** | | 40113 | |
| Interprovincial | | 23822 | |
| Merchandise | | 13089 | |
| Non-merchandise | | 10733 | |
| International | 0 | 16291 | |
| Merchandise | 0 | 13316 | 0.0 |
| Non-merchandise | 0 | 2975 | 0.0 |
| **Statistical Discrepancy** | 57 | -966 | |
| **Gross Domestic Product at Market Prices** | 1977 | 82218 | 2.4 |
| **Final Domestic Demand** | 1857 | 76081 | 2.4 |

* Net of MUSH rebates, which are estimated to be about $130 million.

Source: GST data from National Accounts and Environment Division of Statistics Canada. GDP data from Statistics Canada Catalogue 13-213, *Provincial Economic Accounts, Annual Estimates 1981-1994.*

**• The Goods and Services Tax - some critical comments**

Experience has shown the GST to be highly complex, costly for governments to operate and administer, costly for business compliance, and subject to evasion. The House of Commons Finance Committee neatly summarizes these four criticisms in its report *Replacing the GST - Options for Canada* (June 1994), the result of four months of public hearings on the GST and possible alternatives.

a) The lengthy list of exemptions and zero-rated goods and services makes the GST complex and difficult to understand. The definition of basic groceries is particularly confusing and at times, absurd. Consider, as an extreme case, the croissant: a single plain croissant is not taxable, but with chocolate filling, it is taxable; a package of six or more chocolate filled croissants is not. More generally, the treatment of financial and insurance services, and of the public service sector is extremely complex.

The prevalence of exceptions and exemptions has also reduced the tax base substantially. About one third of total consumer expenditures is not taxed. The Department of Finance estimates in the report that if the GST base were broadened to include basic groceries, the GST rate could be reduced to 6%. Were prescription drugs and medical devices included in the base, and the special provisions for new housing and the MUSH eliminated, the rate could be further reduced to 5.3%.

b) Tax complexity has resulted in significant compliance costs for business. A study prepared for the Department of Finance suggests that for small business in particular, costs as a proportion of tax collected are very high. For businesses with annual sales of less than $200,000, costs may be as much as 17% of tax collected.[7]

c) The GST is also costly to administer. Revenue Canada estimates that in 1992-93, the cost to the government to collect and administer the GST was in the order of 3% of tax collections.[8] This compares to a figure of 1% for the UK VAT and 0.5% for New Zealand's Goods and Services Tax.[9]

---

[7] *GST Compliance Costs for Small Business*, prepared for the Department of Finance by Plamandon and Associates, 1993. (Ref. Finance Committee (Canada), p. 17.) Given that the Plamandon study excluded firms with sales of less than $50,000, the results may in fact be conservative. A study done by the Canadian Federation of Independent Business (CFIB) in 1992 showed that compliance costs for CFIB members represented 25.3% of GST revenues, compared to an average of 5.6% for the Plamandon study. (Ref. B. Dahlby, 1995.)

[8] Revenue Canada Submission to the Standing Committee on Finance, February 10, 1994. (Ref. Finance Committee (Canada), p. 17.)

[9] OECD, *Taxing Consumption*, (Paris, 1988), cited in Richard M. Bird, "The Cost and Complexity of Canada's VAT: The GST in International Perspective," *Tax Notes International*, January 3, 1994. (Ref. Finance Committee (Canada), p. 17.) Note that the U.K. and New Zealand have tax rates almost twice the GST, and costs expressed as a percentage of tax are sensitive to the amount of

d) Resistance to the GST has helped the underground economy as more people use cash transactions for tax avoidance. Spiro (1993) suggests that unreported consumption increased by 0.8% of GDP between 1990 and 1992. The Department of Finance calculates that the underground economy increased in size by between 0.4% and 0.7% of GDP between 1986 and 1992.[10] Other estimates of the size of the underground economy are much larger and vary from 2% to 20% of gross domestic product.

A further criticism, though not addressed by the Department of Finance, relates to Table 4 above. This is the effect of the exemption of goods and services on production costs in general, and export costs in particular. While tax reform was intended to remove taxation from the cost of exports, exemptions have introduced a new form of tax cascading. This was noted above in the context of Alberta. Because suppliers of *tax exempt* products cannot claim input tax credits, the GST is embodied in the cost of their products. The tax on financial services, in particular, cascades into many products with detrimental effects on the competitiveness of Canadian industries.

One final, common criticism of the GST is that its inequitable treatment of products reduces the economic efficiency of the tax. Dahlby describes the efficiency issue:

> *Taxes have efficiency costs when they cause firms to change their production techniques or product mix, or when they cause households to alter their consumption, savings, or labour supply decision relative to what they would be under an equal yield lump-sum tax. The more the tax system distorts the pattern of production and consumption, the greater the efficiency loss from taxation.*[11]

With its numerous exemptions and exceptions, the GST generates differences in the relative prices of various goods and services. These have little to do with economic forces. Prices of taxed items have risen relative to those of tax exempt, and more so relative to items which are zero rated. The result of this distortion is a tax-induced change in the mix of final demand, with consumers substituting consumption of zero-rated and exempt goods for items which are fully taxed. A broader-based GST would reduce these distortions and improve the efficiency of the tax.[12]

---

tax collected. This of course suggests that a harmonized GST applied at a higher rate would technically be more efficient than separate taxes collecting comparable revenue, assuming that the costs of sharing out the revenues are not too onerous.

[10] Department of Finance, The Underground Economy, Technical Working Report, November 1993. (Ref. Finance Committee (Canada), p. 18.)

[11] Dahlby, Bev, "Taxation Under Alternative Constitutional Arrangements", in P. Boothe (ed.), *Alberta and the Economics of Constitutional Change*, Western studies in economic policy: no. 3, 1992.

[12] One should bear in mind that the exclusion of items like basic groceries, prescription drugs and medical devices, and the exemptions and rebates related to residential rents and housing are

**• The provincial sales taxes**

Nine of the ten Canadian provinces levy a provincial sales tax (PST) of some form. All are RSTs except Quebec's, which is a value-added tax partially harmonized with the GST.[13] Alberta is the only province without its own general sales tax.

Provinces are heavily reliant on PSTs for revenue. Annual collections of sales tax revenue is close to $20 billion, a figure exceeding net GST collections of about $16 billion.

PST rates and bases vary by province. The rates range from a low of 6.5% in Quebec, to a high of 12% in Newfoundland where personal income is a less stable tax source. The bases predominantly include goods although in some provinces, the scope has been extended to meals, travel accommodation, media advertising, telecommunication and utilities services, and energy purchases. Quebec applies its tax to the GST base.

**Table 5: Provincial Retail Sales Tax Rates as of March, 1996**

| | % |
|---|---|
| Newfoundland | 12 |
| Prince Edward Island | 10 |
| Nova Scotia | 11 |
| New Brunswick | 11 |
| Quebec* | 6.5 |
| Ontario | 8 |
| Manitoba | 7 |
| Saskatchewan | 9 |
| Alberta | 0 |
| British Columbia | 7 |

* Being largely harmonized with the GST, Quebec's sales tax is in fact a value-added tax and not a retail sales tax.
Source: Canadian Tax Foundation, *The Finances of the Nation, 1995*.

Some provinces have exempted common producers' goods like machinery and equipment in order to reduce tax cascading. Nonetheless, there is a significant

intended to make the tax less regressive. Enhancements to the low income GST credit would be required to preserve the distribution effect of these special provisions were they to be eliminated. See B. Dahlby (1995) for discussion of the regressivity issue.

[13] Refer to Footnote 2 above.

amount of tax applied to business inputs. Hamilton and Kuo (1991) estimate that the effective PST rate on capital goods is about 3.7%

The PSTs are intended to apply to purchases by residents. Similar to the GST, the taxes are assessed on a destination basis - imports are taxed, exports are not. Exports in a provincial context include domestic shipments to other provinces. Nevertheless, some tax is exported because the tax may apply to business inputs. When tax is paid on inputs for the production of commodities to be sold out-of-province, it is not refunded. Kuo, McGirr and Poddar (1988) estimate that the weighted average of the indirect provincial tax rates is approximately 0.6% of Canada's international exports.

An advantage of levying taxes on a destination basis is that it does not distort the location of production. As Hill and Rushton (1993) explain:

> *A VAT levied on a destination basis clearly has no allocational effect across participating jurisdictions. Cross-border trade takes place at prices free of tax. When goods enter a jurisdiction, they are treated in the same way as domestic goods. If, however, the VAT is levied on an origin basis and the rates are not uniform, the relative prices of goods from different jurisdictions are altered. The presence of the taxes will distort purchasers' choices as well as decisions about the location of production. The allocation of resources induced by the taxes will reduce the value of output.*[14]

They reach the very important conclusion that the destination principle is non-distorting even if tax rates differ across jurisdictions (provinces). This contrasts with levying taxes at the origin, a principle that requires uniform tax rates for non-distortion.

Provinces east of Ontario apply their sales taxes *after* GST is imposed. This broadens the base, compared to the alternative of applying the retail sales tax to commodity prices *before* GST. The western and central provinces, from British Columbia through Ontario, employ the latter method and forego the incremental revenues.

Quebec broadened its retail sales tax base when the GST was introduced in 1991, to include the 'moveable property' to which GST is applied. It then partially harmonized with the GST in July of 1992, with an 8% rate on goods and a 4% rate on services. In 1992, Quebec also assumed responsibility for administering the GST on behalf of the federal government. An across the board rate of 6.5% was subsequently adopted in the May 1994 budget.

To repeat, the Quebec sales tax (QST) is partially, not fully harmonized with the GST. Financial services are exempt under the GST and zero rated under

---

[14] Hill, Roderick and Michael Rushton, "Harmonizing Provincial Sales Taxes with the GST: The Problem of Interprovincial Trade", *Canadian Tax Journal*, v.41(1), 1993, at p. 104.

Quebec's sales tax. Businesses may obtain refunds on up to 80% of the QST paid on inputs. However, Quebec does not provide business input tax credits on purchases of most utility services, meals, entertainment, motor vehicle fuel and vehicles used on public roads. Some goods may be zero rated if purchased by a business for resale. In particular, where goods are imported into Quebec for resale, lease or further processing such that the purchaser would qualify for an input tax refund, the QST is not collected. Similar to the GST, Quebec provides rebates to the MUSH sector: 40% to municipalities, 30% to universities and schools, and 19% to hospitals.

**• Comparison to other value-added taxes**

In evaluating the Canadian sales tax regime, comparison with other value-added taxes is useful.

**New Zealand** implemented a value-added tax, called the Goods and Services Tax (GST) in 1986 as part of a broader tax reform program. It was accompanied by a reduction in income tax rates, increased welfare payments to low income families (because of the regressivity of the GST). It replaced a national sales tax and was comparatively easy to implement. There are no provincial governments in New Zealand with which to negotiate implementation.

The New Zealand Goods and Services Tax (GST) is considered a model system. The rate is uniform across goods and services[15], and there are very few exemptions from the tax base. Exports of goods and services are zero rated, as is the transportation of goods and services to and from New Zealand. Tax exempt items include the sale of existing homes, residential rentals, financial services and the supply of donated goods and services by non-profit organizations. Capital gains are exempt with the justification that they are taxed when the funds are spent on goods and services.

We can also gain insight from **Europe's** economic reforms of 1993. Formation of the European Union made it necessary for member states to address some issues of cross-border tax treatment that Canada and its provinces must examine in harmonizing the GST and the PSTs.

The VAT was first introduced in **France** in 1954 to remove tax cascading generated by the existing turnover tax. After the creation of the European Economic Community (EC) in 1958, other European countries quickly followed France. A key objective of the EC was harmonization of fiscal arrangements. The VAT was selected as the best alternative for harmonizing indirect taxes.

[15] The New Zealand GST rate was initially set at 10%, and was raised to 12.5% on July 1, 1989.

Financial institutions are generally exempt from tax in Europe because of the difficulty in defining value-added financial activities. Most housing is also exempt, including new construction and rentals. Food is fully taxed in most countries with the exception of the UK, where definitional problems have subsequently surfaced.

One of the mandates in formation of the European Union in 1993 was abolition of all fiscal formalities at the borders of member states.

Hill and Rushton (1993) summarize how trade among members was handled prior to the 1993 reforms:

> *Under the EC's old system with border controls, exports from a country were zero-rated for its VAT, and the exporter received a rebate for any tax paid on inputs (unless, of course, the exporter had tax-exempt status). If the goods were shipped to another EC country, its VAT was charged on them at the border and paid by the importer to its government. If the importer resold the item or used it as an intermediate good, a credit could later be claimed for the VAT (as for the VAT paid on any other inputs). If the importer was the final consumer, no credit could be claimed.*[16]

As of January 1, 1993, member states entered a transitional taxation scheme (after which Quebec modeled aspects of its QST). Like the old system, it is destination-based. Exports remain zero-rated at origin, but firms receiving the goods pay nothing at the time of import. Assessment of the VAT on imported inputs is suspended. The importer declares the VAT due on the goods at the same time as it files its regular input tax credit claim, so that it is formally charged the VAT but simultaneously credited with a refund. A central VAT Information Exchange System facilitates the exchange of information between nations, effectively replacing border controls.

In late 1994, the European Commission favourably reviewed the transitional scheme. In particular, abolition of border controls had expedited intra-Community transportation by as much as two days, resulting in substantial cost savings for suppliers. However, identification and declaration obligations were judged cumbersome for traders and the Commission sought ways to simplify them. Rate uniformity represents the single most effective means of achieving a truly simple, transparent commodity tax system. Consequently, the Commission is urging member states to move toward greater harmonization of individual VATs.

The transitional scheme is to remain in place until at least 1997, while other options are studied. The definitive system may involve taxing at origin, but with a central clearing agency to handle required adjustments arising from differences

---

[16] Hill, Roderick and Michael Rushton, "Harmonizing Provincial Sales Taxes with the GST: The Problem of Interprovincial Trade", *Canadian Tax Journal*, v.41(1), 1993, at p. 118.

in tax rates and trade flows between member states. Rate uniformity simplifies the role of the clearing agency.

**• Impact of 1991 sales tax reform**

Using a regional general equilibrium model, Hamilton and Kuo (1991) of the Department of Finance, analyzed the replacement of the MST with the GST. The study concluded that sales tax reform could increase real output in Canada in the long run by 1.4% and welfare by 0.9%. The principal objectives of tax reform were to remove the hidden taxes from the cost of capital and from exports, thus improving Canada's international competitiveness. Consequently, the largest GDP improvements were expected in the capital-intensive, export-oriented sectors. It was suggested that because of a disproportionate dependence on these types of industries, Alberta might benefit more than other provinces. Tables 6 and 7 below summarize the sectoral and regional results of the Hamilton-Kuo study.

The aspect of Hamilton and Kuo's work particularly relevant to this research is their consideration of provincial sales taxes. They concluded that extending the 1991 sales tax reform to include provincial sales taxes could add another 0.8% to real output. All regions were shown to benefit from their specification of harmonization because of the reduced cost of capital goods with elimination of taxes on business inputs. The effective PST rate on capital goods was estimated to be 3.7%. As can be seen from Table 7, the prairie provinces recorded the smallest incremental benefit, 0.5%, compared to a maximum of 1.1% for the Atlantic provinces. The study does not report specific results for Alberta, nor does it give details of the PST reform scenario.

**Table 6: Effects of Sales Tax Reform on Sectoral Real Output**

| *Sector* | *Federal-only reform (GST)* | *National reform (NST)* |
|---|---|---|
| Primary | 3.3 | 3.8 |
| Food, beverage and tobacco | 0.3 | 0.8 |
| Manufacturing | 1.4 | 1.8 |
| Construction | 1.6 | 3.5 |
| Transportation and utilities | 3.1 | 3.6 |
| Services | 1.6 | 2.7 |
| | --- | --- |
| Total | 1.4 | 2.2 |

Note: The NST is the case where reform is extended to include provincial sales taxes.
Source: Hamilton, Bob and Chun-Yan Kuo, "Reforming the Canadian Sales Tax System: A Regional General Equilibrium Analysis", *Canadian Tax Journal*, v.39(1), 1991, p. 126.

**Table 7: Effects of Sales Tax Reform on Real Output by Region**

| Region | Federal-only reform (GST) | National reform (NST) |
|---|---|---|
| Atlantic | 1.4 | 2.5 |
| Quebec | 1.0 | 1.7 |
| Ontario | 1.1 | 1.9 |
| Prairies | 2.5 | 3.0 |
| British Columbia | 1.3 | 2.2 |
| | --- | --- |
| Canada | 1.4 | 2.2 |

Note: The NST is the case where reform is extended to include provincial sales taxes.
Source: Hamilton, Bob and Chun-Yan Kuo, "Reforming the Canadian Sales Tax System: A Regional General Equilibrium Analysis", *Canadian Tax Journal*, v.39(1), 1991, p. 127.

The gains reported in the Hamilton-Kuo study are larger than estimates reported in an earlier study by Hamilton and Whalley[17]. This follows from Hamilton and Kuo's attempt to reflect intertemporal efficiency gains due to the removal of the MST on capital goods. The study attempts to capture long-run effects by allowing the stock of capital to rise in response to the elimination of taxes on business inputs.

Ruggeri and Van Wart (1992), of Alberta Treasury argue that Hamilton and Kuo overstate the resulting change in investment. They cite four specific concerns regarding the investment response: First, that Hamilton and Kuo use an estimate of the effective MST that is upwardly biased because of its treatment of the construction sector; second, the model does not include supply constraints on primary resources and consequently overstates the supply response of primary industries and utilities to lower capital costs; third, the assumptions of perfectly divisible capital and constant returns to scale do not suit key industries—utilities in particular; and fourth, the large capital adjustment costs associated with the movement from one equilibrium to another are not considered. [18]

[17] Hamilton, Bob and John Whalley, "Efficiency and Distributional Effects of Tax Reform". In Mintz, Jack and John Whalley, *The Economic Impacts of Tax Reform*, Canadian Tax Paper No. 84, 1989. This study suggests a gain in both welfare and output of about 0.3%.

[18] Ruggeri and Van Wart are also critical of the exclusion of the economic costs imposed by the GST during the first years of the tax. (This is a limitation of the general equilibrium approach, versus a macoreconomic modeling approach.) Dungan and Wilson (1989) estimate that the general price level rises by 2.5% by the third year of implementation if monetary policy is used to defend the exchange rate, real GDP is reduced by 0.3% for the first four years, and the unemployment rate is 0.6 percentage points higher by the fourth year. However, the negative effects are smaller if monetary policy is used only to validate the initial 1.3% estimated impact of the GST on prices. In addition, Dungan and Wilson show overall gains from a more efficient tax

## PART III: SALES TAX HARMONIZATION PROPOSALS

### • The Finance Committee's proposal - a two-tiered harmonized base

In June 1994, the House of Commons Finance Committee released its study on alternatives to the GST. It recommended harmonization of federal and provincial sales taxes through a national value-added tax. The proposed national VAT would have a federal component and a provincial component, with the provinces *having the ability to set their own rates*. Both component rates would be applied to a common base, eliminating some inconsistencies in existing sales tax systems. Exact tax rates would depend on the definition of the tax base. No specific changes to the GST base were recommended, although the report reiterated that a broad base would be easier and less costly for administration and compliance. The Committee pointed out that additional savings could be achieved if the tax were administered by a single central authority.

One controversial implication of the harmonization proposal is that provinces would have to stop taxing business inputs. While this would eliminate provincial tax cascading and improve the competitiveness of Canadian exports (by lowering the cost of capital), some provinces were resistant to it because as much as 40% of their sales tax revenues were from business inputs.

Other key features of the proposal were a simplified small business calculation to be based on business income tax returns, and tax-included pricing with disclosure on receipts.

With regard to interprovincial trade flows, the report recommends that sales of consumer goods be taxed on an origin basis. For business inputs, it is suggested that they be taxed on a destination basis and zero-rated for VAT-registered purchasers. (This is similar to the European Union's transitional arrangements.) This approach would prevent "tax rate shopping" by businesses selling exempt goods and services. It would also reduce the overall volume of input tax credits required in the system and compliance costs for businesses.[19] There would be no need for businesses to track sales or purchases made in different provinces. They would only charge tax on their sales within a province and only pay tax on the in-province purchases at the in-province rate. The proposed small business calculation would accommodate interprovincial activity by grouping sales and purchases by province.

---

system within five to six years. Ten years out, output improves by 0.4% to 0.6%.

[19] Boothe and Snodden (1994) note that one of the most important determinants of administration costs is the number of times the government must collect the tax before it can keep the tax revenue. The suspension method of exempting business from paying taxes on business inputs reduces gross tax collections, hence administration costs.

**• Mr. Martin's proposal - a uniform base, a single rate and sharing of revenue**

On June 30, 1994, the federal finance minister proposed an alternative approach to the GST which differed substantially from the recommendations of the Finance Committee. Mr. Martin suggested that federal and provincial sales taxes be harmonized at a single rate of 10%, with four percentage points of the rate assigned the federal government and the provinces taking the remaining six percentage points. The federal government's resulting revenue shortfall was to be made up with a flat tax on income. Most provinces would see a reduction in collections because of the exemption of business inputs, but this would be at least partially offset by broadening their tax bases to include services. Again, shortfalls could be recovered through higher income taxes. Mr. Martin estimated that prices would fall by 1% as sales tax collections under the new system would be less than before. He also estimated the reforms would increase Canadian GDP by 1.45%.

This proposal was subsequently modified. The 10% rate was bumped up to 12%, with five points for the federal government and seven points for the provinces. A phase-in of the business input tax credits was also proposed to allay concerns about the revenue loss from eliminating provincial taxes on these inputs.

The proposal for uniformity in both base and rate results in an over-collection of tax in Alberta. The federal government, however, has committed to ensuring revenue neutrality for the province. Were the province fully reimbursed, the provincial government could potentially reduce its top personal income tax rate to 30% from 46.5%.[20] Many other options—from reductions in health care premiums to reductions in the gasoline tax—are available to secure revenue neutrality. However, the Alberta government has stated that it will not participate in any policy options that require changes to the provincial tax system.

A further abatement option is for the federal government to reduce Alberta's federal personal income taxes through a rebate scheme similar to what is in place for Quebec. Quebec opts out of certain programs under the Federal-Provincial Fiscal Arrangements Act, and Quebec taxpayers are compensated through a refundable personal income tax abatement of 16.5% of basic federal tax.

---

[20] "Son of GST is worse than the father: two proposed replacements would nail Alberta in particular"; *Western Report*, v.9(37), October 10, 1994, pg. 14-15. Estimate attributed to Bev Dahlby, of the University of Alberta, who suggested that the proposed tax would cost Albertans an additional $1.2 billion in sales taxes.

**• Alternative provincial proposals**

Ontario and Manitoba responded to Mr. Martin's original proposal with their own alternatives. Ontario suggested that provinces give up their retail sales taxes in exchange for greater control over the design and collection of personal income taxes. An increase in federal GST would be offset by a reduction in federal personal income taxes. The provinces could then raise their respective personal income tax rates. This amounts to a swapping of sales tax points for personal income tax points.

Manitoba proposed a variation on the Ontario theme. Rather than giving the provinces greater control over personal income taxes, Manitoba recommended that the surplus collected by the federal government be channeled back to the provinces through a national health care fund, allocated on a per capita basis.

**The Finance Committee proposal contrasted with the Finance Minister**

The proposals of the Finance Committee present an important contrast with those of Mr. Martin. One emphasizes base harmonization, while the other insists on base AND rate harmonization. A key question follows about how a federal political system operates. Insistence on both base and rate harmonization when linked to an arrangement under which the federal government is to receive a fixed share of the established rate, reduces the degree of provincial autonomy over their respective tax structures. No longer are they free to set their own sales tax rate. How realistic is an insistence on base and rate harmonization in a federal system?

## PART IV: THE HST AND ALBERTA - CONCEPTUAL ISSUES

Before analyzing the effect of sales tax harmonization on Alberta there are a number of important conceptual questions to be considered. Those discussed in Part IV are premised on the tax system proposed by the federal finance minister on June 30, 1994.

### • The harmonized GST—a HST

The term HST is taken to mean that the rate is increased from 7% to 12%, and applied to the existing GST base. Provinces with provincial sales taxes (PSTs) are assumed to adopt the GST base for the 5 percentage points of GST revenue deemed to accrue to them. It is also assumed that under a HST, rebates to the MUSH sector would continue at a level to ensure an effective rate no greater than the rate paid under the old MST.

It is also accepted that the federal government would ensure a revenue-neutral HST for Alberta. Neutrality would be achieved by remitting back to Albertans any revenues collected in excess of the current 7% GST , through a reduction in federal personal income taxes. From Table 2 above, net GST collections from Albertans before the GST credit are close to $2 billion. A HST rate of 12% is expected to raise sales tax revenues of about $3.4 billion, a $1.4 billion increase over current collections.

### • Trade and the HST

What effect would a HST have on Alberta's competitive position in international and interprovincial trade? Trade drives the provincial economy. Alberta is the epitome of an economy whose producers and consumers face prices largely determined in international markets.[21] Exports out of Alberta, interprovincial and international, amounted to 57.4% of GDP in 1994. The comparable figure for imports was 48.8%[22].

Since the HST is levied on a destination basis, Alberta's exports to other provinces compete with international imports at international prices plus transportation costs plus HST and appropriate provincial sales taxes. Similarly,

---

[21] Ruggeri and Van Wart (1992) argue that Alberta producers in some instances do in fact have market power. They cite natural gas and sulphur as examples where Alberta is a world player and has the ability to influence international prices. To the extent that this is true, Alberta producers might be able to export a portion of the tax.

[22] Statistics Canada, *Provincial Economic Accounts, Annual Estimates, 1981-1994*, Catalogue 13-213.

imports into Alberta from other provinces are priced at international prices plus transportation plus HST. Alberta exports to the rest of the world are GST-free (zero rated) while the prices of international imports landed in Alberta equal world prices, transportation costs and HST.

**• Alberta's international exports**

Under a HST regime, the prices of Alberta's international exports would remain directly unaffected since they are *zero rated*. However, there are indirect effects stemming from the *exempt rated* goods and services that adversely affect their competitive position. As pointed out previously, the prices of *tax exempt* goods and services include any tax paid during the production process. Other sectors, including exports using *tax exempt* commodities as intermediate inputs, will reflect the embodied tax paid in either higher prices, or where prices are determined by international markets, through lower profitability. This tax cascading was discussed above in the context of the GST in Alberta, and in Table 4. Tax cascading would be compounded by an increase in the rate unaccompanied by broadening of the tax base.

**• Alberta's interprovincial exports**

Under a HST regime, the relative price of Alberta's exports to other provinces vis-à-vis other Canadian and international exports is unchanged. These prices are largely determined in international markets, and all would be similarly affected under a destination-based rule for applying the HST.

However, the demand for Alberta's interprovincial exports will change. This will depend on how the economies of the other provinces are affected by harmonization. Harmonization will change **absolute and relative prices, disposable income,** and **production costs**, any one of which will have consequences for Alberta.

Consider first the **prices** of goods and services in the other provinces. For most, the new HST rate will differ from the original combined GST and PST rate. For items previously both GST and PST taxable, the resulting change in price may be small in comparison to what will result for items previously excluded from PST bases.[23] Some prices will be higher and some lower:

• where the new prices are lower, demand would tend to rise after harmonization and Alberta exports could benefit in proportion to their share of domestic consumption;

---

[23] Final prices will also be affected by the elimination of tax cascading. For simplicity, discussion of cascading in the context of own- and cross-price effects is omitted.

• conversely, where the new prices are higher and demand lower, Alberta exporters might lose sales. (Technically this is referred to as the own-price effect.)

There are also cross-price effects to consider. These are the changes in demand which take place because of relative price changes. Some goods and services will become more (less) expensive compared to others as a result of harmonization. Demand will shift to those which have become comparatively less expensive. Again, Alberta producers may profit or lose, depending on the direction in which demand for their product moves.

Overall, Mr. Martin expects harmonization at a 12% HST rate to result in a 1% decrease in the average level of consumer prices. This implies an increase nationally in **real disposable income**--in the spending power of consumers. An increase in demand for goods and services could result, and exporters to the provinces (including Alberta exporters) would benefit in proportion to their share of domestic consumption. This income effect would be more pronounced if the federal government were to provide transitional grants to provinces whose sales tax revenues are reduced by harmonization.[24] This scenario would not be so optimistic should federal and provincial governments increase other taxes to make up for lost revenue. (Mr. Martin's proposal suggested that the federal government would impose a flat tax on income to recoup the foregone GST revenues.)

For provinces relying less heavily on sales taxation, the HST rate might exceed the old combined rate. In this case, real disposable income would fall and depress demand. Given that sales tax rates tend to decline as we move from east to west (see Table 5 above)--toward Alberta's more immediate neighbours--Alberta may be disadvantaged. The size of the effects depend on both the geographic distribution and commodity breakdown of Alberta's interprovincial exports.

Finally, a key argument made for GST harmonization is that elimination of tax cascading inherent in the existing PSTs will improve the cost structure of business. Unlike the GST, firms cannot apply the current PST paid on inputs against the PST collected on sales. Hence the PST on intermediate inputs becomes part of the **cost of production**. The adoption of a HST removes this tax

[24] The agreement announced on April 22, 1996 by the federal government and the governments of the three Atlantic provinces (see note 2 above) includes a package of transition payments. Any province whose sales tax revenues fall by more than 5% as a result of harmonization qualifies for assistance offsetting 100% of the amount of shortfalls greater than the 5% threshold in the first two years, 50% in the third year and 25% in the fourth. For the three Atlantic provinces, assistance will total $961 million over the 1997-2001 period.

compounding and improves the competitive position of business in those provinces with PSTs.[25]

What does this mean to Albertans? Elimination of tax cascading would not affect Alberta consumers and producers directly since the province has no PST. Nor would it measurably affect producers and consumers in Alberta through lower prices for goods from other provinces, since the prices of most tradable goods and services are determined in international markets.

However, lower production costs would be expected to stimulate production in provinces where cascading now occurs. This indirectly affects Alberta's exports. On one hand, domestic production would rise at the expense of imports, including those from Alberta. On the other hand, the rise in provincial income which would also occur could lead to overall expansion in the demand for imports, including those from Alberta. (Recall that Mr. Martin suggested that tax harmonization would increase Canadian GDP by 1.45%.) The net effect for Alberta is difficult to predict. However, since more than two-thirds of Alberta's exports are either unprocessed or semi-processed natural resources--these tend to be relatively insensitive to changes in income--the effect may be small.

In summary, the impact of harmonization on Alberta's interprovincial exports will depend primarily on how it affects the economies of the other provinces. Price changes there will result in higher demand for some of Alberta's exports, and lower demand for others. While domestic income and demand in the other provinces is expected to rise overall, lower domestic production costs in provinces where tax cascading was significant may result in substitution away from imports, including those from Alberta.

**• Trade, cost and output benefits from harmonization**

Like their counterparts elsewhere in Canada, Alberta firms selling goods to other provinces confront complexities in complying with the GST and assorted PSTs. Currently, many goods and services are subject to the GST but not the provincial taxes and vice versa. Further, there are ten tax agencies (one federal and nine provincial) that spend either all or much of their resources catering to this structure. An important question is the value of the savings and the increased output that will result from Mr. Martin's proposal for harmonization of both the tax base and the tax rate. Perhaps even a more important question is the relative

---

[25] This is premised on the assumption that the provinces do not introduced any new taxes on capital or production. As part of the the Federal/Atlantic province harmonization agreement (see notes 2 and 23 above), the federal government gave the participating provinces increased flexbility in other areas of taxation. Two days after the harmonization agreement was announced, the government of Nova Scotia presented a budget which introduced a new capital tax of 0.25%. This suggests that some of the expected gain in productivity may be somewhat at risk.

contribution of base harmonization to reducing administrative/compliance costs and increasing output.

The Canadian Institute of Chartered Accountants' publication Do the Right Thing (1996 Toronto) offers estimates of the savings in (i) administrative costs and (ii) complicance costs following on base and rate harmonization. The study does not separate estimated savings from base as opposed to rate harmonization.

The present costs of administering the federal GST and the respective PSTs (excluding Quebec) are set at $350 million. Of this total, $250 million is GST administration with an estimated $100 million for PST administration. The study estimates that net savings from base and rate harmonization would in the range of $73 to $87 million, a figure which assumes a single tax collection agency but allows some increase from a base of $250 million in its costs of operation. Put otherwise, under these conditions total administrative costs would fall from $350 million into the range of $263 to $277 million.

Estimated annual compliance costs of business for PSTs (excluding Quebec) are estimated at from $400 to $700 million, and annual compliance costs for the GST at from $600 million to $1.2 billion. Studies suggest that compliance costs for credit-invoice VATs such as the GST are higher than for PSTs because of the sheer volume of transactions taxpayers must track.[26] Tax is collected on each transaction in the production and distribution process. Based on data found in Kesselman (1994), this transaction volume produces an estimated $5 collected by businesses in gross GST revenue for every $1 of net GST revenue reported by the federal government. With harmonization all compliance costs related to PSTs would be eliminated.

Summing administrative savings together with reduced compliance costs suggests that national savings would be in the range of $473 to $787 million.

As reported in Part III above, Hamilton and Kuo concluded that extending the 1991 tax reform to include provincial sales taxes could add 0.8% to national real output in the long-term with all regions benefiting from harmonization. The benefits arise primarily from elimination of taxes on business inputs. That, of course, indicates the primary importance of base harmonization. Even a reduction in their estimate to a conservative 0.5% would amount to an increment in output of about $4 billion (1996 dollars).

Since no existing studies quantitatively separate the positive impacts of base from those of rate harmonization, let us ask the following question:

• what would be the benefits from a single rate, say 12%, applied to the present complex mix of GST and PST bases?

---

[26] For a summary of compliance cost studies, see B. Dahlby (1995).

Surely, the introduction of a uniform rate absent base harmonization does not constitute reform of the tax system. Virtually all the advantages of integrating the GST with PSTs follow from base harmonization. The only possible conclusion is that base harmonization is the overwhelming source of economic benefits.

**• Exports - cross-border shopping**

Hill and Rushton (1993) note that tax-induced pressures for cross-border shopping are not significant in Canada, *except* along the Alberta-Saskatchewan border. (Pressures along the Alberta-British Columbia border are moderated by geography and population density.) The move to a national harmonized rate is a disincentive for Saskatchewan residents to cross-border shop in Alberta. The prices of Alberta products will have risen relative to those in Saskatchewan and retail sales to residents of Saskatchewan will be expected to decline.

**• Alberta's Imports**

Under a destination-based tax, imports are fully taxed and exports are zero rated. Consequently, the move to a 12% national harmonized GST will result in a decline in the province's terms of trade with the rest of Canada and the world. That is, the prices of Alberta's imports will rise relative to the prices of exports. The competitive position of Alberta producers of import-competing goods will not change in that Alberta producers must also collect the higher tax. The concern is that a decline in the terms of trade implies a loss in provincial income, as Alberta will pay more for its imports while receiving no greater revenue from its exports.

Elimination of tax cascading will provide little relief to the adverse effect on Alberta's terms of trade. Remember that for the majority of Alberta's imports, prices are determined by international markets. In cases where Alberta consumers import goods from other provinces for which there are no foreign produced alternatives, the amount of tax embodied in the price is likely to be relatively small. Recall that Kuo, McGirr and Poddar (1988) estimate the weighted average of the indirect provincial tax rates is approximately 0.6% of Canada's international exports.

Other provinces will enjoy an overall improvement in their terms of trade. The 12% HST will result in combined federal-provincial revenue collections less than current combined GST/PST collections. Of course, in the overall context of trade, some sectors will benefit while others suffer, because the provinces will be taxing a broader base than under their present PSTs.

**• A harmonized GST with revenue neutrality - its effect on Alberta**

The federal government has made a commitment that a HST will be revenue-neutral with respect to Alberta. The simulation results reported in Part V assume that the federal government remits the incremental revenue arising from the harmonized GST back to Albertans in the form of a reduction in federal personal income tax payable. The effect is to increase personal disposable income of individual Albertans. In addition it is assumed that tax credits would increase proportionately with the increase in the rate from 7% to 12%.

A common criticism of the GST noted above was the tax-induced change in the mix of demand which is generated by the inconsistent treatment of various goods and services under the GST. Exclusions and exemptions cause changes in the relative prices of commodities. These distortions lead to the substitution of tax-free and exempt items for relatively more expensive, taxable items.

Despite any abatement given to Alberta, sales tax harmonization will still have a significant effect on the structure of the economy through relative price changes. An increase in the rate without broadening the tax base compounds the price distortions, an unfortunate feature of the present tax. In the short-term, the demand for GST exempt and zero rated goods and services will rise and that for those goods and services subject to a HST will fall. While individuals are to be compensated to attain revenue-neutrality, their consumption pattern will be altered. (See Appendix A for the theory of compensated demand shifts.)

Table 8 provides an insight into the shift in relative consumer prices within Alberta accompanying a HST. Imposition of the GST in 1991 effectively raised the consumer price index (CPI) in Alberta by more than 4%, although the effect was substantially offset by removal of the old MST. The incremental effect of harmonization is shown in the last column of the table. Overall, an increase in the rate in Alberta of 5% would represent an increase in the CPI of 3.2%. However, the price of private transportation services would increase by 5% while public transportation would increase by only 2.3%. Similarly the price of food purchased from a store would increase by 0.4% while the price of restaurant meals would rise by 5%.

**Table 8: Direct Impact of the GST on Alberta CPI**
(CPI weighting based on 1992 basket)

| | *CPI Weight* | *Impact of 7% GST** | *Impact of 5% increase* |
|---|---|---|---|
| Food | | | |
| Purchased from stores | 11.19 | 0.6 | 0.4 |
| Restaurants | 6.26 | 7 | 5 |
| Shelter | | | |
| Rented | 6.83 | 0.5 | 0.4 |
| Owned | 12.74 | 0.5 | 0.4 |
| Water, Fuel and Electricity (wtd.) | 4.68 | 5.5 | 4.0 |
| *Water (21%)* | | 0 | 0 |
| *Fuel&Elt (79%)* | | 7 | 5 |
| Household Operations and Furnishings | 10.43 | 7 | 5 |
| Clothing and footwear | 7.28 | 7 | 5 |
| Transportation | | | |
| Purchase and Rental of Autos | 7.81 | 7 | 5 |
| Operation | 9.02 | 7 | 5 |
| Public Transportation | 1.31 | 3.2 | 2.3 |
| Health and Personal Care | | | |
| Health Care | 1.92 | 0 | 0 |
| Personal Care | 2.69 | 3.9 | 2.8 |
| Recreation, Education and Reading | | | |
| Recreation (wtd.) | 10.14 | 6.0 | 4.3 |
| *Equipment (55%)* | | 7 | 5 |
| *Services (45%)* | | 4.9 | 3.5 |
| Education and Reading (wtd.) | 2.65 | 2.2 | 1.6 |
| *Education (69%)* | | 0 | 0 |
| *Reading (31%)* | | 7 | 5 |
| Alcoholic Beverages and Tobacco Products | 5.05 | 7 | 5 |
| Total (weighted) CPI | 100 | 4.4 | 3.2 |

* These are gross estimates which do not reflect the elimination of the MST.
Source: Statistics Canada, *The Consumer Price Index Reference Paper, Updating Based on 1992 Expenditures*, 1995; and National Accounts and Environment Division data on GST.
Note: Shares shown in brackets ( ) are based on 1994 personal expenditures from National Accounts and Environment Division of StatCan.

A similar story can be told about overall provincial production referring once again to the evidence in Table 4 above. This associates the effective GST rate with components of provincial GDP. The GST incidence falls primarily on final consumers, and will raise the cost of consumption and residential investment

vis-à-vis business investment and exports. An increase in the GST rate will cause resources to shift further toward investment and exports and away from consumer spending. Based on net GST collections of about $2.0 billion (before the GST credit), the 7% GST rate imposes a tax of 2.4% on total production in Alberta. Extrapolating, an increment of 5% in the HST will effectively raise the cost of production in Alberta by another 1.8%.

In summary, while the federal government may strive to ensure that HST revenue neutrality for Alberta accompanies the move to a HST, it cannot offset the consequences of the change in relative prices. Even with revenue neutrality, the HST will have a significant effect on the structure of demand within the Alberta economy.

**• Dynamic effects of GST harmonization**

There are also dynamic effects on Alberta from moving to a HST in Alberta. For example, some wage contracts still link changes in wages directly to changes in the cost of living during the term of the contract (COLA clauses). Hence, a rise in the consumer price index accompanying a HST would initiate a round of wage increases notwithstanding any rise in after-tax wage income occasioned by the fall in federal taxes. Wage increases, were they to occur, would then feed into production costs and fuel further price increases. However, less than one quarter of the workforce in Alberta is unionized, and very few contracts in Alberta still contain COLA clauses. Inflation has not been a key issue of union negotiation since the Bank of Canada implemented its inflation target of 2% ± 1% in the early 1990s.

Imposition of the GST in 1991 with concurrent elimination of the MST added only about 1.5% to the cost of living in Alberta. This is in comparison to the 3.2% tax burden imposed on the Alberta CPI (Table 8 above) by a HST. Some indirect effects discussed more fully in Part V are expected to mitigate the inflationary effect of the higher HST rate.

**• Income distribution considerations of a HST**

Assume again that any incremental revenues accompanying a HST will be returned to Albertans through a reduction in federal personal income taxes. Incremental revenues from a national sales tax rate of 12%, after additional credits of $170 million, would be about $1.25 billion. Federal personal income taxes paid in the province in 1994 are estimated at $6 billion. Thus remitting back to Albertans the net incremental revenues from the HST would amount to a reduction in federal personal income taxes of approximately 21%.

A key question is exactly how the federal government would abate the incremental HST revenues through the federal personal income tax system.

Would each of the marginal tax rates fall by the same percentage? Would Albertans receive a lump-sum credit based on an estimate of the incremental HST payments for individuals in particular income classes? In Quebec, for example, taxpayers receive a refundable tax credit of 16.5% for federal programs from which the Quebec government has opted out.

Appendix A contains a simplified representation of individual compensation when the rate is increased. A dilemma is that the amount spent on categories of goods and services subject to HST, those tax exempt and those zero rated vary by income class. Table 9 reveals that the share of average expenditures on food (most of which is zero rated) ranges on the Prairies from 19.5% for individuals with incomes under $15,000 to 16.1% for those with incomes in excess of $80,000 in 1992. In the case of shelter, another category not fully taxed, those with incomes under $15,000 spent 23.4% of total expenditures on either rented living quarters or owned living quarters while the comparable figure for those with incomes in excess of $80,000 was 17.8%.

**Table 9: Summary of Average Expenditure Share, by Income Quintile Prairie Provinces, 1992 (percent)**

| | Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All Classes | Under $15,000 | $15,000 - $19,999 | $20,000 - $29,999 | $30,000 - $39,999 | $40,000 - $49,999 | $50,000 - $59,000 | $60,000 - $79,000 | Over $80,000 |
| Food | 17.5 | 19.5 | 19.5 | 18.5 | 17.8 | 17.4 | 17.8 | 16.9 | 16.1 |
| Shelter | 21.8 | 30.8 | 28.2 | 23.7 | 21.9 | 21.4 | 21.0 | 21.0 | 18.7 |
| Household * | 10.8 | 9.9 | 10.8 | 10.3 | 10.4 | 10.4 | 10.5 | 10.4 | 12.1 |
| Clothing | 7.3 | 4.9 | 4.9 | 6.3 | 6.5 | 6.6 | 7.5 | 8.2 | 8.9 |
| Transportation | 17.7 | 13.8 | 14.7 | 18.3 | 18.8 | 18.8 | 17.0 | 17.2 | 18.1 |
| Health, Education | 4.8 | 5.5 | 4.8 | 4.4 | 4.7 | 4.5 | 5.8 | 4.2 | 4.8 |
| Recreation | 8.3 | 4.1 | 5.9 | 5.6 | 7.4 | 7.8 | 8.8 | 9.8 | 10.6 |
| Tobacco, Alcohol | 4.3 | 5.8 | 5.0 | 5.3 | 5.2 | 5.0 | 3.9 | 4.2 | 2.8 |
| Miscellaneous | 7.6 | 5.7 | 6.2 | 7.7 | 7.4 | 8.0 | 7.7 | 8.1 | 7.8 |
| Total (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Total spending ($) | 30892 | 12348 | 17115 | 22648 | 27668 | 33419 | 35955 | 43990 | 55942 |
| Average income ($) | 44793 | 10669 | 17521 | 25011 | 34899 | 44871 | 54787 | 69602 | 106721 |
| Spending share (%) | 69.0 | 115.7 | 97.7 | 90.6 | 79.3 | 74.5 | 65.6 | 63.2 | 52.4 |

* Includes household operation, furnishings and equipment.
Source: Statistics Canada Catalogue 62-555, Family Expenditure in Canada, 1992.

Expenditure surveys suggest that individuals with low incomes generally spend a greater share of their income on zero rated goods and services such as basic groceries and shelter compared with higher income individuals. It is unclear how remission of the incremental tax revenues will address this. Reducing federal personal income marginal tax rates across the board by the same percentage will tend to generate tax windfalls for low taxable income individuals

at the expense of higher taxable bracket individuals who spend proportionately more on goods subject to the HST.

**• Sales taxation versus income taxation - long term considerations**

There are differing opinions on whether there might be longer term benefits to Alberta associated with a shift toward lower income taxation and higher sales taxation. It can be argued that by taxing the returns to work effort (wages and salaries) and saving (interest and investment income), personal income taxes are a disincentive to work. If that is in fact true, harmonization with abatement through decreased federal income taxes could result in an increase in the supply of labour in Alberta, improving the competitiveness of Alberta producers. Offsetting this however, is the argument that sales taxes also reduce the incentive to work. Even the broadest based sales tax does not tax leisure and may therefore affect the work-leisure choice. Sales taxes are also an incentive to consume outside the country, and may encourage our "snowbirds" to spend even greater more time and income in the United States.

## PART V: THE HST AND ALBERTA - SIMULATION RESULTS

### Alberta Computable General Equilibrium Model

Computable general equilibrium (CGE) models have been used extensively to examine the impact of policy changes on the economy. We now report the estimated impact on the economy of a HST using a CGE of the Alberta economy.

CGE models typically summarize the way in which an economy works. The model of the Alberta economy we employ contains four basic blocks or sets of equations. The first links producer prices to input prices; a second set links producer prices to demand prices; the third links the demand for primary inputs of labour and capital to the supplies of these factors; the fourth set of equations links the prices paid by goods entering interregional and international trade to prices in the global economy.

Many of the underlying economic relationships in the model are nonlinear. For computational ease the model was transformed by converting each equation from a relationship in terms of levels into one of proportional or percentage change.

Because economic growth in the province remains export-driven, an examination of the impact of a HST should utilize a framework which reflects the importance of trade flows. The CGE model portrays Alberta as a small, open economy consisting of nine sectors distinguished primarily by their trade characteristics. Agriculture, energy, forestry, food and beverage products, wood and paper products, and petrochemicals and industrial chemicals represent six key exporting sectors. A seventh sector includes all other import-competing manufacturing industries. The eighth sector comprises non-traded services and the final sector is government.

The model is a policy simulator not a forecasting tool. Only the impact of a HST enters the analysis; all other disturbances to the economy such as changes in international export and import prices or other government policy initiatives are ignored.

Model simulations estimate the changes in economic activity in response to the imposition of a HST. Thus, the results show the particular impact holding unchanged all other variables such as productivity growth, levels of capital investment, and world price changes.

A HST is examined for two time frames. They distinguish the degree to which the economy adjusts to the tax system change. These are referred to as *immediate* and *short term* impacts on the economy, respectively. In the concluding part of

this section an evaluation of some *long term* impacts of the GST change are considered.

The *immediate impact* includes only the direct effect of tax-induced price changes on the incomes of individuals. It is BEFORE the economy responds to price changes, and BEFORE the federal government takes steps ensuring revenue-neutrality for Albertans. The immediate effects hold the structure of the economy constant.

The *short term* impact allows many elements of the economy to respond. Changes in demand due to price and income effects are allowed to alter input and output prices. Labour is reallocated across sectors, or between the pool of the employed and unemployed. The flows of intermediate inputs shift, changing the structure of the economy. And action to assure revenue neutrality for Alberta is introduced. However, in this simulation the supplies of labour and capital to the Alberta economy remain fixed. Effectively, the short term specification addresses directly the impact of GST harmonization on the *current* population and the *existing* capital stock.

Changes in labour supply and capital formation occur in *the long term*, but the prospective impact of these changes are not examined specifically by our model. Once interprovincial migration and adjustments to the capital stock are introduced, then issues of who and what is affected become more ambiguous. We do not ignore the long term considerations. A qualitative consideration of the long term effect of sales tax harmonization concludes this section of the report.

**• Immediate impact**

The *immediate impact* on the Alberta economy of an increase in GST rate from 7% to 12% is driven by the tax-related price effects of the policy. It was noted above that a 5% increase in the rate imposes on the economy a 1.8% increase in the GDP deflator. If GDP is viewed as unchanged in the very short-term, then real GDP would decline by 1.8% with the imposition of a harmonized GST. Once federal initiatives to make the HST revenue-neutral come into play, the immediate price effects would be offset to some extent. This is discussed further in the following section.

The immediate impact on the real purchasing power of consumers would be greater than the impact on GDP. The share of items in the consumer price index subject to the rate increase exceeds the share of personal consumption in GDP. Table 8 indicates that a 5% increase in rate would effectively increase the CPI by 3.2%. Thus, in the time period before the federal government's effort to make a HST revenue-neutral in Alberta, real wages (nominal wages adjusted for inflation) could fall by as much as 3.2%.

• **The short-term: model results**

However, the above estimates of the immediate impact of a HST on the Alberta economy exaggerate the impact of the policy on prices because:

• they exclude the abatement proposed by the federal government, and

• they neglect the response of the economy to the change in relative prices brought about by the tax increase.

Since final demand goods and services subject to the HST will rise in price by 5%, there will be a significant increase in their price relative to those goods and services either exempt or zero-rated. Diagram 1 in Appendix A, for example, highlights the impact of these changes in relative prices on consumer choice. The changes in relative prices as they affect consumers and producers will have a significant impact on industrial structure, production and returns to capital.

The simulation to estimate short term impacts assumes a fixed size for both the capital stock and the provincial labour force. Simulations were run for the following two labour market alternatives:

• first was the *flexible* wage case in which nominal wage rates adjust so as to ensure full employment. The full employment condition requires that labour be mobile across sectors.

• second was the *inflexible* wage case that treats nominal wage rates as "sticky". This simulation assumes that the labour market adjusts to the impact of a HST through changes in the level of employment.

Further simulations both with and without tax abatement were run for these two alternative labour market conditions. In simulations where the province is compensated for a HST, abatement is modeled as a lump-sum transfer to residents of Alberta sufficient to maintain the province's nominal GDP. In the very short-term, abatement will lag behind harmonization. Depending on how the abatement is given, it will take at least one quarter for the federal government to issue larger HST credits to individuals and until the end of the tax year to reduce federal personal income tax rates in Alberta to return the incremental revenue. For comparison, results without abatement are also given. They capture the indirect effects of the tax increase, i.e., the changes in the structure of the economy resulting from the higher tax rate.

The direct price effects, as set out in Table 4 above, are introduced into the model as exogenous shocks to final demand prices. The service sector supplies the majority of final goods and services, as compared to the intermediate inputs supplied by the traded sectors. The higher HST rate raises final demand prices

relative to intermediate prices. Consequently, the service sector is most heavily affected by the HST.

Further, as players in a small, open economy, Alberta producers of traded goods are international price-takers and face elastic demand for their output. Therefore, they respond to changes in demand and production costs through a reallocation of output. Imposition of the GST initially withdraws income from the province, which brings about a contraction in Alberta demand and a decline in real wages. The decline in wages enhances the competitiveness of domestic producers, who respond by either increasing exports, or in the case of import-competing industries, substituting domestic production for imports. The service sector does not enjoy this flexibility, and must respond to changes in demand through both output and price.

**Table 10: Short-term Impact of a HST on Albertans - Results (percent change)**

| | Flexible Wage | | Inflexible Wage | |
|---|---|---|---|---|
| | Without Abate | With Abate | Without Abate | With Abate |
| Nominal GDP | -2.15 | 0.0 | -2.31 | 0.0 |
| Real GDP | -1.26 | -0.15 | -2.15 | -0.51 |
| Real Wage | -2.68 | -2.13 | -0.05 | -0.94 |
| Employment | 0.0 | 0.0 | -2.33 | -0.80 |
| CPI | -0.88 | 0.49 | 0.18 | 1.00 |
| GDP Deflator | -0.88 | 0.15 | -0.15 | 0.51 |

From the simulation results reported in Table 10, it is apparent (though not surprising) that abatement is critical effect to the size of harmonization impacts. Should the federal government not return incremental revenues to Alberta from a HST rate of 12%, the loss in real GDP can range from a low of a 1.26% to a high of 2.15%. Potentially, the loss could exceed the immediate impact of 1.8% noted in the previous section. When it is assumed that the federal government returns enough funds to ensure that nominal GDP is unchanged, the loss of real GDP arising from harmonization is significantly reduced to a range of 0.15% to 0.51%.

Simulations reveal that revenue-neutrality is not a guarantee of policy-neutrality for Albertans. Although the government restores nominal income, real GDP is still negatively affected because of the impact of the change in relative prices on the service sector. Within the service sector, the increase in the GST rate initially raises consumer prices and causes demand to fall. Once new conditions are established, the tax incidence in the service sector is shared by producers and

consumers. Producers absorb part of the tax in the form of lower product prices, profits and output, while consumers pay higher prices than before harmonization. Although the trading sectors are able to expand because of improved competitiveness, they do not fully offset the contraction in the service sector, a part of the economy that supplies close to two thirds of final demand.

The magnitude of the contraction, as well as depending on whether abatement takes place, also depends very much on how the labour market adjusts. The GDP loss under the sticky or inflexible wage scenario is larger, because the nominal wage cannot fall to maintain employment levels: hence employment falls with further loss of income. In the inflexible case with abatement, the 0.8% decrease in the level of employment corresponds to a loss of about 10,000 jobs. If wages are flexible, they decline, allowing unemployed workers to be re-employed in export and import-competing industries. Although the latter industries also expand in the inflexible wage case, they do so to a lesser extent than in the flexible wage case.

An interesting result in the inflexible wage case is that real wages fall more where abatement occurs. Inflexible wages mean that adjustments occur through the level of employment. Once the abatement revenue is received, it stimulates more demand and price pressure. Real wages are affected by general price movements. The resulting higher rate of inflation with abatement brings lower real wages. The flexible wage case also has higher inflation with abatement, but nominal wages also rise as the abatement income stimulates demand.

Note also that in all cases, the increases in the CPI and GDP deflator are less than the immediate impact estimates of 3.2% and 1.8% respectively, discussed in the previous section. This is because the increase in the tax rate and resulting relative price changes are contractionary, causing income and demand to fall and creating downward pressure on prices and production costs.

- **Limitations of the results**

Any simulations are sensitive to the specifications and parameters of the model. In these simulations, a key set of parameters are the income and price elasticities of final demand . Final demand is assumed to be unit elastic with respect to both income and price (a 1% change in price or income is associated with a 1% change in quantity purchased or in expenditure). While this specification provides analytical convenience and theoretical consistency, it may prove to be overly simplistic.

Furthermore, the model is Alberta-based only and does not take into account whatever interprovincial feedback effects may occur, including the income effects arising from greater efficiency attributable to harmonization. The model cannot capture the conceptual issues discussed above regarding interprovincial exports.

- **The long term - some additional comments**

The Alberta CGE model is a short-term in character. This format addresses the specific impact of a HST on the *current* population and the *existing* capital stock. In the long run the economy is more adaptable. Capital stock and labour supply will respond after a transition period to movements in real wages and to the lower cost of capital. These adjustments will offset some of the adverse short-term impacts considered above.

It needs emphasis that many benefits of harmonization are long term in nature. In particular, the elimination of hidden taxes improves profitability in the near term in provinces with existing retail sales taxes. There will be an even greater effect longer term as producers respond with new production capacity to meet higher domestic and external demand. Potentially, demand in other provinces could be stimulated sufficiently to increase demand for Alberta-produced goods and services. This is likely the province's best opportunity for growth as a result of harmonization.

Whether or not Alberta can gain a share of this incremental demand depends on how harmonization affects Alberta's competitiveness domestically and internationally. Other provinces will see their production costs improve because of the elimination of tax cascading and subsequent decrease in the cost of capital. The effect on capital costs in Alberta will be smaller, given that a comparatively limited amounts of provincial sales tax is exported to Alberta. Yet the contractionary impact of harmonization could turn out to be a mixed blessing in the long term since lower wages could* help to strengthen Alberta's competitive position.

## PART VI: CONCLUSIONS

There are two aspects to harmonization: harmonization of (1) tax *bases* and (2) tax *rates*.. A key issue raised in the study is the need to weigh the incremental benefits to Canada of a harmonized *rate* against the adverse, short term adjustments imposed on Alberta by a sudden increase in sales taxation.

We submit that from an Alberta perspective, the Finance Committee's 1994 recommendations are more attractive than Mr. Martin's plan to move to a uniform rate, even with abatement of the incremental revenues collected from Alberta. In its June 1994 recommendations to government, the Finance Committee stressed the benefits of adopting a consistent, broad tax base, and gave suggestions as to how to best accommodate variable provincial tax rates. Of the two components of harmonization, it is the adoption of the GST *base* which will eliminate tax cascading and facilitate the greatest growth in Canadian production and investment. An even broader base would improve the overall efficiency of the tax system. While a harmonized *rate* would bring further simplicity to the sales tax environment, the resulting increase in sales taxation in Alberta would impose short term costs and adjustments on the province. Further Canada is a federation. There is a reasonable probability of securing inter-governmental agreement on a uniform base. Second best solutions are preferable to stalemate.

Model simulation estimates that despite revenue-neutrality, i.e. where there is no increase in the general rate of taxation, harmonization at a 12% rate will have a contractionary effect on the Alberta economy in both the immediate and the short term. despite efforts by the federal government to ensure revenue-neutrality. The finding is primarily the result of relative price changes. In particular, a HST at a 12% rate makes items supplied primarily by the services sector more costly relative to tradeable, intermediate inputs supplied by other sectors. This reduces the demand for service sector outputs. Though there are benefits for suppliers of traded goods from improved competitiveness, these are not sufficient to offset the losses imposed on the service sector.

Harmonization at a 12% rate across Canada will cause real gross domestic product (GDP) in Alberta to fall by up to half a percent in the short term with the loss of as many as 10,000 jobs. The estimated negative impact on GDP is reduced if wages also fall to mitigate the effect on employment. Real wages can be expected to decline by about 1% to 2%, depending on their flexibility.

It is necessary to distinguish between the short term and long term effects of the harmonization proposal. Many of the expected benefits of harmonization occur in the long term and will directly affect only those provinces with existing retail

sales taxes. Further, the long term effect on Alberta's competitiveness vis-a-vis the other provinces is ambiguous. However, it is possible that the gains accruing to Canada as a whole will be sufficiently large to benefit Alberta indirectly in the long term.

The longer term benefits of harmonization will directly affect only those provinces with existing retail sales taxes. Further, the long term effect on Alberta's competitiveness vis-a-vis the other provinces is ambiguous. However, it is possible that the gains accruing to Canada as a whole will be sufficiently large to benefit Alberta indirectly in the long term.

We also conclude that harmonization at a 12% tax rate will have a negative effect on taxation efficiency in Alberta. The increase in the sales tax rate will bring about a change in the mix of final demand in Alberta. Products of those industries fully taxed will become more costly relative to goods less than fully taxed. This distortion in economic structure imposes an efficiency loss on Albertans. (A broader tax base would be less distortionary.) In contrast, other provinces will see the overall efficiency of their sales tax regimes improve with harmonization.

## APPENDIX A - THE COMPENSATED DEMAND SHIFT

The federal government is proposing to increase the GST rate applied in Alberta, while ensuring revenue-neutrality for the province. In economic terms, the proposal encompasses a *compensated demand shift*. This is described below.

Diagram 1: Compensated Demand

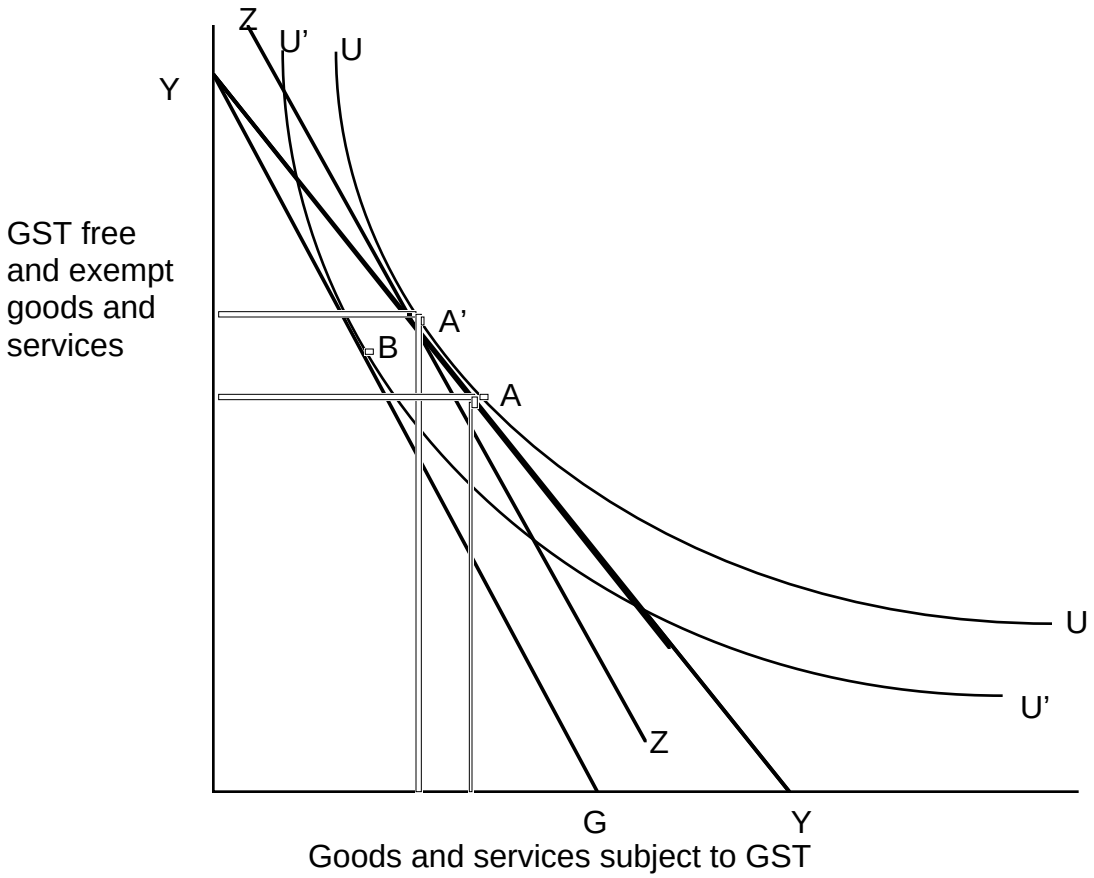



Diagram 1 illustrates the impact of the increase in GST and personal income tax transfer back to Albertans. The vertical axis depicts the quantity of GST free and GST exempt goods and services that could be bought with an individual's disposable income; the horizontal axis depicts the quantity of goods and services subject to a harmonized GST that could be bought by the individual. The curve UU depicts the various combinations of GST free and exempt goods and services and those subject to a harmonized GST that yield the same level of well-being to an individual. The line YY depicts the income of the individual and the slope of the line indicates the price of GST free and exempt goods and services relative to the price of those goods and services subject to a harmonized GST. The point A represents the combination of the two types of goods and services that yields the maximum level of well-being for an individual.

An increase in the GST from 7% to 12% is represented by a pivoting inward of the income line YY along the horizontal axis. YY moves to YG. If individuals now spend all their income on goods subject to the GST, they could purchase less than before. Yet if all income was spent on GST free and exempt goods and services the same amount as before could be purchased. The point B represents the best the individual can now do given the increase in prices because of the rate in the GST. All points along the curve U'U' represent the combination of goods and services that yield the same level of well-being (these represent a lower level compared to UU). Note that at B the individual now consumes less of both goods. The increase in price reduces the real income or purchasing power of the individual.

But the federal government intends to give back enough money to the individual, say through a reduction in federal personal income taxes, such that he or she would be no worse off than before the harmonized GST was imposed. This would be depicted by the line ZZ which lies above the line YG but is parallel to it. The fact that the new income line ZZ is just tangent to the original curve UU represents the fact that the individual can now attain his or her original level of well-being but at the new prices inclusive of the harmonized GST.

Given income compensation, the individual can attain the same level of well-being as before, but note that at A' the individual now consumes less of taxable goods and services and more of the GST-exempt and -free goods. The individual will substitute away from taxable goods because their price has risen relative to goods and services not fully taxable.

## APPENDIX B: GLOSSARY

**business inputs:** the intermediate materials, services, or semi-finished goods sold between firms. The firm purchasing business inputs adds value through its own activity. (see value added).

**destination based tax:** a tax levied on residents for their consumption of domestically produced and imported goods and services. Goods and services exported to non-residents are not taxed, whereas imports are. Exporters are able to claim a full refund on the tax paid for purchases from other businesses.

**input tax credit:** used by the federal government to ensure that tax does not cascade when business inputs are sold between business firms. The GST is collected on all purchases of intermediate and final goods and services. However, businesses are given a rebate for the taxes they pay on purchases from other business firms.

**origin based tax:** a tax levied on residents only for their consumption of domestically produced goods and services. Imports are exempted. Exports may be subject to tax making them less competitive internationally.

**partial zero rated VAT:** the supplying firm claims a rebate for a portion of the taxes paid on sales.

**retail sales tax (RST):** a tax on consumption levied at a single stage—the retail level. Retail sales taxes generally include on goods (as opposed to services) in their base, and are applied at intermediate and final points of sale. Consequently, RSTs frequently tax business inputs.

**tax cascading:** multiple taxation. Tax cascading occurs when tax is paid on the value of an input in the production process when that input is purchased, and again when output is sold. Tax cascading reduces the international competitiveness of a country's exports by embedding a tax cost component into the final price of the commodity. Embedded tax artificially inflates the cost of production. Retail sales taxes and turnover taxes are examples of taxes characterized by cascading. A VAT eliminates cascading by taxing only the value added at each stage of activity.

**tax-exempt VAT:** final consumers do not pay the tax but suppliers may not recover the related input tax.

**turnover tax:** a tax on the value of all sales of goods and services, including exports. Multiple taxation (tax cascading) occurs because tax is applied at all

levels of activity. The effective tax rate on a particular commodity depends on the number of trade levels both the commodity and the inputs used to produce it have to move through.

**value added:** the amount of value that is added by a business firm through its own activity to the goods and services it buys from other business firms. The value added by a firm is equal to its total receipts from sales less its total purchases of goods and services from other firms.

**value added tax (VAT)**: a tax applied on the value added at each stage of the commercial process—A multi-stage VAT is applied to all sales of goods or services by all businesses in the production and distribution chain, whether to the consumer (final point of sale) or to other businesses (intermediate stages of production and distribution). Alternatively, one can consider the VAT to be a method of collecting a retail sales tax in fractional payments, or installments, with each installment proportional to the value added by each taxable firm. It is equal to a tax on the final sale to consumers.

**zero rated VAT:** final consumers do not pay the tax and suppliers may recover their input tax.

## BIBLIOGRAPHY


1. Black, Carolyn G., "The New Zealand GST Experience: Some Lessons for Canada", *Business Quarterly*, v.55(2), 1990, pg. 64-68.

2. Boothe, P. and T. Snodden, *Tax Collection in Canada: Prospects for Reform*, a C. D. Howe Institute Commentary, No. 63, October 1994.

3. Canadian Institute of Chartered Accountants, *Do the Right Thing, a submission on a National Sales Tax*, June 1996.

4. Canadian Institute of Chartered Accountants, *Getting Off the Deficit Treadmill, a submission to the Standing Committee on Finance*, January 1996.

5. Canadian Tax Foundation, *The Finances of the Nation*, 1995.

6. Canadian Tax Foundation, *The National Finances, 1994*.

7. Clancy, D. and Phillip Smith, "The Treatment of the GST in the Income and Expenditure Accounts", *National Income and Expenditure Accounts*, Statistics Canada Catalogue 13-001, First Quarter 1991, pg. xxxxiii-liii..

8. Clark, Murray B., "Kiwi GST Goes Canuck", *CA Magazine*, v.123(1), January 1990, pg. 46-48.

9. Dahlby, B., "Taxation Under Alternative Constitutional Arrangements", in *Alberta and the Economics of Constitutional Change*, P. Boothe, (ed.), Western Studies in Economic Policy: no. 3, 1992.

10. Dahlby, B., *Replacing the GST: Issues and Options*, a submission to the Government of Alberta, October 11, 1995.

11. Department of Finance (Canada), *Goods and Services Tax Technical Paper*, August 1989.

12. Department of Finance (Canada), Budget Papers, *The Goods and Services Tax*, April 27, 1989.

13. Department of Finance (Canada), *Economic and Fiscal Effects of the GST - A Summary*, November 1989.

14. Due, John, "The New Zealand Goods and Services (Value-Added) Tax - A Model for Other Countries", *Canadian Tax Journal*, v.36(1), 1988, pg. 125-144.

15. Dungan, D.P. and T.A. Wilson, "The Proposed Federal Goods and Services Tax: Its Economic Effects Under Alternative Labour Market and Monetary Policy Conditions", *Canadian Tax Journal*, v.37(2), 1989, pg. 341-367.

16. The European Commission, *Bulletin of the European Union,* v.10 (1994), item 1.2.15.

17. The European Commission, *Bulletin of the European Union*, v.11 (1994), items 1.2.24 and 1.2.25.

18. Finance Committee (Canada), *Replacing the GST - Options for Canada,* June 1994.

19. Hamilton, Bob and Chun-Yan Kuo, "Reforming the Canadian Sales Tax System: A Regional General Equilibrium Analysis", *Canadian Tax Journal*, v.39(1), 1991, pg. 113-130.

20. Hamilton, Bob and John Whalley, "Efficiency and Distributional Effects of Tax Reform". In Mintz, Jack and John Whalley, *The Economic Impacts of Tax Reform,* Canadian Tax Paper No. 84, , Canadian Tax Foundation, 1989, pg. 373-398.

21. Hill, Roderick and Michael Rushton, "Harmonizing Provincial Sales Taxes with the GST: the Problem of Interprovincial Trade", *Canadian Tax Journal*, v.41(1), 1993, pg. 101-122.

22. Jones, Rich and John Whalley, "Regional Effects of Taxes in Canada - An Applied General Equilibrium Approach", *Journal of Public Economics,* v.37, 1988, pg. 1-28.

23. Kesselman, Jonathan R., "Assessing a Direct Consumption Tax to Replace the GST", *Canadian Tax Journal*, v. 42(1), 1994, pg. 709-803.

24. Kuo, Chun-Yan, Thomas C. McGirr and Satya N. Poddar, "Measuring the Non-Neutralities of Sales and Excise Taxes in Canada", *Canadian Tax Journal,* v36(3), 1988.

25. McKenna, Barrie, "Quebeckers Brace for a 4-per-cent Levy", *The Globe and Mail*, July 1, 1992, pg. B1.

26. Parmenter, B.R., "Inter-Industry Analysis: The ORANI Model of Australia's Industrial Structure". In Webb, L.R. and R.H. Allen, *Industrial Economics - Australian Studies*, 1982, pg. 69-110.

27. Percy, M.B. and K.H. Norrie, "Reciprocity and the Canadian General Election of 1911", *Explorations in Economic History*, v.19, 1982, pg.409-434.

28. Perry, J. Harvey, *Taxation in Canada, Fifth Edition*, Canadian Tax Paper No. 89, Canadian Tax Foundation, 1990.

29. Revenue Canada, *Tax Statistics on Individuals, 1993 Tax Year*, 1995.

30. Ruggeri, G.C. and D. Van Wart, "Overoptimism and the GST: A Critical Comment of the Hamilton and Kuo General Equilibrium Analysis", *Canadian Tax Journal*, v.40(1), 1992, pg. 148-161.

31. Spiro, Peter, "Evidence of a Post-GST Increase in the Underground Economy", *Canadian Tax Journal*, v.41(2), 1993, pg. 247-258.

32. Shoven, John B. and John Whalley, *Applying General Equilibrium*, 1992.

33. Smith, Phillip, "Assessing the Underground Economy: The Statistics Canada Perspective", *The Canadian Economic Observer*, Statistics Canada, May 1994, pg. 3.16-3.33.

34. Smith, Phillip, "The Allocation of Indirect Taxes and Subsidies to Components of Final Expenditure", *National Income and Expenditure Accounts*, Statistics Canada Catalogue 13-001, Third Quarter 1990, pg. xxxiii-xliv.

35. "Son of GST is Worse than the Father: Two Proposed Replacements Would Nail Alberta in Particular", *Western Report*, v.9(37), October 10, 1994, pg. 14-15.

36. Statistics Canada, *Canadian International Merchandise Trade*, Catalogue 65-001.

37. Statistics Canada, *The Consumer Price Index Reference Paper, Updating Based on 1992 Expenditures*, 1995.

38. Statistics Canada, *Manufacturing Industries of Canada, National and Provincial Areas, 1993*, Catalogue 31-203; also various industry-specific catalogues from the Census of Manufacturing.

39. Statistics Canada, *Provincial Economic Accounts, Annual Estimates, 1981-1994*, Catalogue 13-213.

40. Statistics Canada, *Refined Petroleum Products*, Catalogue 45-004.

41. Statistics Canada, *Coal and Coke Products*, Catalogue 45-002.

42. Statistics Canada, *The Crude Petroleum and Natural Gas Industry*, Catalogue 26-213.

43. Statistics Canada, *Private and Public Investment in Canada, Intentions 1995*, Catalogue 61-205.

44. Statistics Canada, *Family Expenditure in Canada*, 1992, Catalogue 62-555.

45. "Tax Cards on the Table at Meeting", *Financial Post* v.88(42), October 15/17, 1994, pg. 7.

46. Whalley, John and Deborah Fretz, *The Economics of the Goods and Services Tax*, Canadian Tax Paper No. 88, Canadian Tax Foundation, 1990.

47. Wilson, Thomas A. and D.P. Dungan, *Fiscal Policy in Canada: An Appraisal*, Canadian Tax Paper No. 94, Canadian Tax Foundation, 1993.