

# Made in Ontario

## The Case for Sales Tax Harmonization



2009

## **Supporting Organizations**

Canadian Manufacturers and Exporters

Certified General Accountants of Ontario

The Conference Board of Canada

Greater Toronto Electrical Contractors Association

Institute of Competitiveness and Prosperity

Ontario Road Builders' Association

Ontario Trucking Association

Retail Council of Canada

TD Bank Financial Group



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## The Case for Sales Tax Harmonization

Prepared for the Ontario Chamber of Commerce

Prepared by:  
The Centre for Spatial Economics

**2009**

The Ontario Chamber of Commerce (OCC) is a federation of 160 local chambers of commerce and boards of trade in the Province of Ontario, representing 60,000 businesses of all sizes, in all economic sectors and from every area of the province. In its mandate to advocate strong policies on issues affecting its members, the OCC is currently focused on economic renewal and business competitiveness. Its over-arching goal is to make Ontario the most competitive jurisdiction in North America.

## Abstract

Ontario's economy is under siege, confronting serious challenges: a global recession, a volatile Canadian dollar, unstable energy and raw material costs, manufacturing plant shutdowns and relocations, financial sector turbulence and labour market shortages to name a few. The provincial government has only a limited set of fiscal resources and regulatory options to combat these challenges.

This study presents the economic benefits associated with a set of reform options for sales taxes in Ontario. Ontario's current sales tax system raises the cost of investment spending for business and, therefore, retards productivity in this province. Ontario households also find themselves paying tax on top of tax for many purchases – raising the cost of too many items. Tax reform options exist that yield benefits to households, businesses and even governments in terms of reduced costs, higher incomes and improved productivity. While tax reform will not solve all the economic challenges confronting the province at this time, it is an essential element in a strategy to confront these challenges.

## About This Study

This study was commissioned by the Ontario Chamber of Commerce (OCC) to provide analysis of the economic benefits of reforming Ontario's sales tax. The OCC is a non-partisan and non profit organization acting as the "Ontario's Business Advocate." The OCC provides a forum to express views and develop policies with the goal of shaping provincial government policy development in order to encourage a prosperous business climate in Ontario.

The study was conducted by Ernie Stokes, Managing Director, and Robin Somerville, Director of Corporate Research Services, of The Centre for Spatial Economics (C<sub>4</sub>SE). The C<sub>4</sub>SE monitors, analyzes, and forecasts economic and demographic change throughout Canada at virtually all levels of geography. It also prepares customized studies on the economic, industrial and community impacts of various fiscal and other policy changes, and develops customized impact and projection models for in-house client use. Our clients include government departments, industry and professional associations, crown corporations, manufacturers, retailers and real estate developers.

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## Executive Summary

Public policy initiatives to enhance Ontario's competitiveness are essential not only for the manufacturing sector but also for a broad range of industries that rely on external markets and the domestic industries that supply our exporters.

Public policy advocates have repeatedly argued for "smart tax policy" in Ontario. Smart tax policy recognizes that government revenue requirements are real and there is limited room for tax cuts at present; it also recognizes that existing taxes are eroding this province's competitive advantages.

In response to the challenges faced by the province, *the Ontario Chamber of Commerce has proposed the province adopt reform of its sales tax system at the earliest opportunity.*

This report shows that harmonization of Ontario's sales tax with the federal Goods and Services Tax is one of the most readily available tax policy options available to government that will immediately realize significant benefits to the taxpayer and the economy as a whole. Such benefits will continue to be realized in the years to come.

The time is right for such a significant policy change. The Canadian and provincial economies are being challenged by a worldwide recession, and governments are eager to implement significant policies that will help their constituents weather the storm, while at the same time ensuring that the economy will emerge from the downturn in a stronger financial position. Harmonization of the sales tax is one policy that will help governments achieve these goals.

Federal government cooperation and support will be essential in the transition to a value-added tax. Fortunately, the federal government has indicated a willingness to work with provinces who wish to harmonize their sales taxes, providing an important window of opportunity which should not be squandered.

**"This report shows that harmonization of Ontario's sales tax with the federal Goods and Services Tax is one of the most readily available tax policy options available to government that will immediately realize significant benefits to the taxpayer and the economy as a whole."**

In the spirit of breaking down trade barriers between Canadian provinces, and efforts to ensure a recovery begins here at home, harmonization of sales taxes also offers an opportunity to eliminate a significant obstacle for businesses trying to conduct trade between Canada's two most populous provinces, Ontario and Quebec.

The OCC proposes that the province either move to harmonize its 8% sales tax with the 5% GST (the *HST* reform option) or develop a Made-in-Ontario *Ontario Sales Tax* alternative (the *OST-a* and *OST-b* reform options).

The Made In Ontario scenarios are merely illustrative in nature, in order to demonstrate the various policy options available to the Government of Ontario as it determines the optimum path to harmonize the province's sales tax with the federal Goods and Services Tax.

The **OST-a** reform option illustrates how the current Retail Sales Tax (RST) could be replaced with a harmonized value added sales tax at 8% (plus the 5% GST). In this scenario, the Ontario portion of the tax is exempted on purchases of children's clothing, "clean" electricity, labour intensive services and the purchase of goods and services from the municipal, academic, schools and hospital sectors.

The **OST-b** reform option is identical to the HST except for its treatment of the financial services sector. This scenario converts the Ontario portion of the HST from exempt to zero rated for the financial services sector but levies a new tax on the industry to compensate the provincial government for its lost RST revenue.

This report clearly demonstrates that Ontario's households, businesses and government can all experience **a win-win-win outcome from the reform of Ontario's sales tax.**

Higher incomes, lower prices, increased competitiveness and higher tax revenues characterize the broad economic outcomes of sales tax reform. Beyond these benefits, however, are:

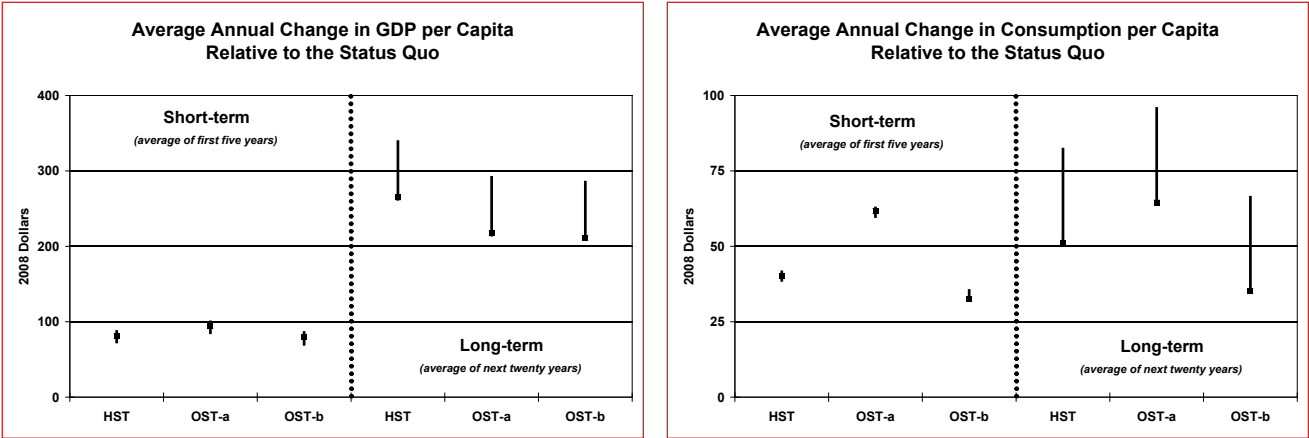
- the potential to encourage a green agenda through targeted sales rate reductions or exemptions;
- support for low income families through an Ontario sales tax credit that would reduce the regressivity of the proposed sales tax;
- a reduction in the burden to small business of sales tax compliance and the potential to encourage certain sectors through targeted sales rate reductions or exemptions;
- greater transparency in pricing for consumers with a reduction in the amount of "hidden" taxes paid;
- a reduction in the complexity and burden of sales taxes on Ontario's trade with other provinces;
- and finally, the support reform would provide to cities and regions as they tackle infrastructure renewal throughout the province.

The economic impacts relative to the Status Quo are summarized in **Figure 1**. Sales tax reform reduces the cost of capital in Ontario which boosts investment, raises productivity and the standard of living in Ontario (typically defined as real GDP per capita). Households are also better off with disposable income and consumption higher than in the Status Quo.

**“the federal government has indicated a willingness to work with provinces who wish to harmonize their sales taxes, providing an important window of opportunity which should not be squandered.”**



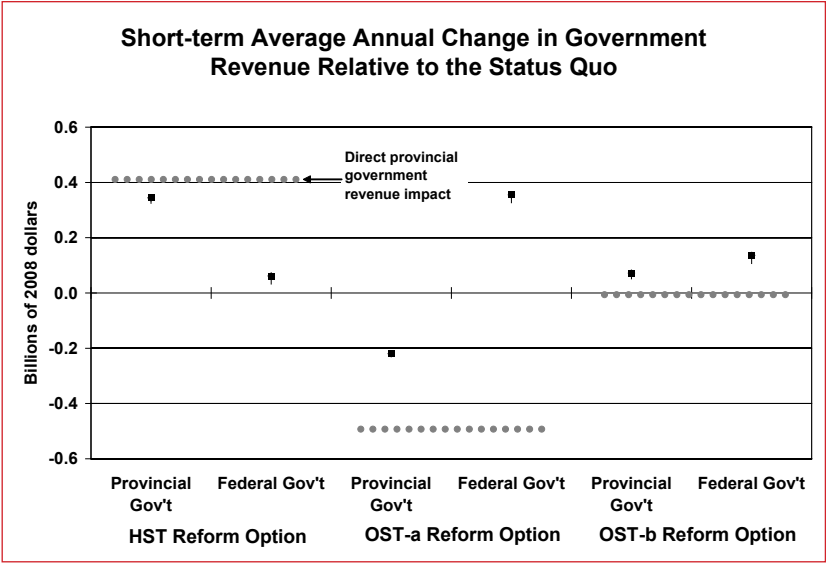
Figure 1<sup>1</sup>



The **direct** impact of each sales tax reform option in terms of provincial tax revenue varies from a gain of \$415 million for the **HST** reform option and a loss of \$491 million for the **OST-a** reform option. The **OST-b** reform is essentially revenue neutral (see Figure 2).

Figure 2

**“Higher incomes, lower prices, increased competitiveness and higher tax revenues characterize the broad economic outcomes of sales tax reform.”**



1 The range in estimated economic impacts for each reform option reflect different assumptions regarding producer behaviour in passing on reductions in costs to their customers (the worst case) and Ontario’s ability to attract additional investment from outside the province as a result of the improvement in its competitiveness relative to other jurisdictions. The estimates with additional investment are shown as the most positive impacts while the impacts excluding this additional investment are represented by the square box located on the line. The short-term refers to the average annual impact in the first five years following tax reform and the long-term refers to the average annual impact over the following twenty years.

The increase in economic activity arising from sales tax reform ensures that *total provincial government revenues are stronger* even in the short-term than what is suggested by the direct impact of sales tax reform.

The provincial government can introduce tax reform without risk to its fiscal position – provided tax breaks are kept to a minimum. With federal government revenues also rising, primarily due to gains from personal income tax revenues, *a modest compensatory fund provided by the federal government would ensure a positive outcome for the provincial treasury.*

With Ontario facing the challenges of a global recession, a volatile Canadian dollar and unstable commodity prices, manufacturing plant shutdowns and relocations, financial sector turbulence and labour market shortages, the *need to reform Ontario's sales tax system could not be greater.*

Public policy *can* make a difference. It is time to tax smarter for our prosperity.

**“The increase in economic activity arising from sales tax reform ensures that total provincial government revenues are stronger even in the short-term than what is suggested by the direct impact of sales tax reform.”**

## Introduction

The C<sub>4</sub>SE expected economic growth in Ontario to weaken to 1.3% in 2008, after a relatively poor performance of 1.9% in 2007<sup>2</sup>. With Ontario facing the challenges of a global recession, a volatile Canadian dollar and unstable commodity prices, manufacturing plant shutdowns and relocations, financial sector turbulence, and labour market shortages, Ontario's economy will be fortunate to perform at even that level in the months to come.

Ontario's manufacturing sector has been hit hard by the events of the past few years and is now clearly in a serious recession. Manufacturing sector GDP declined in 2005 and 2006 and will continue to do so in 2007 and 2008. The impact on employment in the sector has been even larger and an increase in employment is not expected to occur again until 2011. A recovery in manufacturing will require improved competitiveness as well as stronger markets for our goods – particularly in the U.S.

Public policy initiatives to enhance Ontario's competitiveness are essential not only for the manufacturing sector but also for a broad range of industries that rely on external markets and the domestic industries that supply our exporters.

Public policy advocates have repeatedly argued for “*smart tax policy*” in Ontario in the last few years. Smart tax policy recognizes that government revenue requirements are real and there is limited room for tax cuts at present; it also recognizes that existing taxes are eroding this province's competitive advantages.

A recent study by the C.D. Howe Institute<sup>3</sup> noted that provincial sales taxes impose significant costs on business inputs including purchases of capital goods needed to spur growth in productivity and employment.

The C.D. Howe Institute study found evidence from the provinces that have reformed their sales taxes of *(i) an increase in investment spending* and *(ii) no significant increase in consumer prices*.

The Ontario Chamber of Commerce has consistently argued for smart tax policy and is adding its voice to the growing chorus asking the government to reform the province's sales tax system.

2 C<sub>4</sub>SE Provincial Forecast, January 2008

3 Michael Smart, *Lessons in Harmony: What Experience in the Atlantic Provinces Shows About the Benefits of a Harmonized Sales Tax* (Toronto: C.D. Howe Institute, Commentary No. 253, July 2007), available at [www.cdhowe.org](http://www.cdhowe.org).

## Ontario Chamber of Commerce Sales Tax Reform Proposals

The Ontario Chamber of Commerce reviewed a set of possible reform options: harmonization with the federal goods and services tax and various made-in-Ontario variants<sup>4</sup>. The basic sales tax rate for each reform option was set at 8% – the same as the current Retail Sales Tax.

The differences in the structure of each tax reform option, however, means that Ontario government revenue generated by sales and other taxes varies relative to the revenue they currently collect in the Status Quo outlook.

The Harmonized Sales Tax (HST) reform option would replace Ontario's current Retail Sales Tax (RST) with a tax applied to the same commodities as the current federal goods and services tax.

Commodities that are zero-rated or exempt under the GST would also be exempt or zero-rated for the Ontario portion of the HST and the sales tax rebate for new housing based on selling price would be extended to the Ontario portion of the HST.

The issue of administration of the tax is not material to this analysis – it could be administered either federally or provincially – but Ontario would receive revenues based on the rate selected. The rate used in this study is 13% (equal to the current federal 5% rate plus an Ontario rate of 8%).

Made-in-Ontario Sales Tax (OST) reform options also replaced the current provincial sales tax with a tax applied to the same commodities as the current federal goods and services tax but at a reduced rate for selected commodities. The tax rate for these options was also 13% (8% Ontario plus 5% GST) except for commodities selected from the following list, which are taxed at a lower rate:

- Children's clothing
- "Clean" electricity generation and/or fuel
- Financial services (banks, insurance, securities dealers)
- Labour intensive services (hairdressing, domestic care, small repairing, renovations, and cleaning services to households)
- Municipal sector
- Academic sector
- Schools
- Hospitals

<sup>4</sup> Detailed information on the commodities affected by the sales tax exemptions proposed by the OCC can be found in Appendix A.

Two possible reform options are reviewed in this study.

The first **Made-in-Ontario Sales Tax (OST-a)** reform option reviewed in the '*Economic Impact*' section of the report replaces the current provincial sales tax with a value added tax applied to the same commodities as the current federal goods and services tax, but at a zero rate for: children's clothing, "clean" energy, labour intensive services, and the Municipal, Academic, Schools and Hospitals sector (MASH).

The second **Made-in-Ontario Sales Tax (OST-b)** reform option is the same as the harmonization option but zero-rates the financial services industry *for the Ontario portion of the sales tax*. The province is, however, assumed to levy a new tax on the industry to compensate for its loss of RST revenue. This arrangement mirrors the one adopted by the province of Quebec when they agreed to harmonize their sales tax with the GST.

## The Benefits of Sales Tax Reform

Reform of Ontario's sales tax system *will improve the province's international competitiveness*.

With the current high level of the Canadian dollar, increased competition from global competitors and growing labour shortages domestically, the need for this reform could not be greater.

Smart tax policy can, however, achieve even more for Ontario by:

- encouraging a green agenda,
- supporting low income families,
- promoting small business growth,
- providing greater transparency in pricing for consumers, and
- supporting cities and infrastructure renewal.

### Supporting Green Development

By adopting the first Made-in-Ontario sales tax reform option, the provincial government will enhance its ability to encourage production and consumption of renewable or cleaner energy sources. Policy options include:

- The OST is applied across all energy sectors while renewable energy is exempted or taxed at a reduced rate.

### **Supporting Low Income Families**

- OST credits for lower income Ontarians, similar to the GST rebate would be provided based on a qualifying income threshold. This feature reduces the regressive impact of sales taxes.

### **Promoting Small Business**

- A single sales tax with one set of returns and forms will reduce the burden of tax compliance on all businesses in Ontario.
- The OCC proposal includes either a reduced or zero rate of tax for labour intensive services such as hairdressing, domestic care, small repairs, renovations, cleaning services to households, etc.
- The OCC also proposes an increase in the small business registration OST threshold from the current \$30,000 to \$50,000 (the impact of this initiative has not been assessed in this analysis).

### **Transparency for Consumers**

- The OCC recommends transparency in pricing with displayed prices excluding the sales tax in business to consumer transactions.

### **Support for Internal Trade**

- The proposed reforms to Ontario's sales tax system would significantly reduce the complexity and burden of sales taxes on Ontario's trade with other provinces.

### **Support for Cities and Infrastructure Renewal**

Cities and regions across Ontario have emphasized the need for infrastructure renewal in the province. Municipalities are now asking the provincial government to eliminate the RST on the cost of goods and services they purchase to help pay for needed infrastructure renewal.

- The proposed reforms to Ontario's sales tax system would all significantly reduce the cost of public sector spending on infrastructure and the delivery of services to residents and businesses.

This analysis does not address the issue of administration of the Ontario sales tax. The tax could be administered either federally or provincially with that level of government remitting the net tax owing to its partner government.

...

The next section of this report reviews the amount of sales tax typically paid in Ontario by type of purchase and by purchasing sector.

A discussion of the methodology and assumptions used to generate the analysis and economic impacts is provided in the third section and is followed by a presentation of the results focusing on the benefits to households, businesses and governments.

The final section of the report provides some observations and conclusions on the benefits of tax reform.

The report also includes a number of appendices that provide detailed information on the methodology and data used in the study.

## Sales Tax: How Much Do You Pay?

The impact of sales taxes – both federal and provincial – varies widely across the goods and services purchased either by households, businesses or governments. The GST is charged on most, but not all purchases and is applied on value added at each point of sale. The RST is charged on many goods and some services and is applied to the entire value of the transaction – not just the value added for that transaction. Complicating the analysis is the cascading nature of both taxes where the purchaser can end up paying tax on taxes applied earlier in the production and distribution process. As a result, the proportion of tax paid varies widely from the statutory combined RST and GST rate of 13% and depends on who is buying what.

This section reviews the amount of tax paid for a typical \$100 purchase by sector of the economy and the amount of tax paid by the average person in Ontario.

**Table 1** shows the average amount of sales tax paid on \$100 of purchases (valued before sales taxes at the point of sale)<sup>5</sup>. The first two columns in **Table 1** show the hidden sales taxes paid by business and passed on in the final cost of the goods or services. The taxes paid by business are, therefore, added to the taxes paid on the purchase price to arrive at the total taxes paid by sector of the economy<sup>6</sup>.

In total, the GST adds an average \$2.63 to the purchase price of \$100 of personal spending on goods and services while the RST adds \$3.79. The amount of tax paid by consumers, however, varies widely across different types of goods and services with taxes paid on services being considerably lower than those paid on durable goods.

**Table 1**

Sales Tax Paid on \$100 of Goods & Services by Sector						
	Taxes paid by Business		Taxes paid on the Selling Price		Total Taxes Paid	
	GST	RST	GST	RST	GST	RST
Personal expenditures, total	0.18	0.26	2.45	3.54	2.63	3.79
Personal expenditures, durable goods	0.00	0.06	4.97	8.74	4.97	8.80
Personal expenditures, semi-durable goods	0.00	0.07	4.90	6.55	4.90	6.62
Personal expenditures, non-durable goods	0.00	0.09	3.01	4.59	3.01	4.68
Personal expenditures, services	0.31	0.39	1.42	1.71	1.72	2.10
Business Investment	0.01	1.06	0.57	3.01	0.58	4.07
Machinery and equipment, non-government sector	0.01	0.09	0.63	4.51	0.64	4.60
Construction excluding housing, non-government sector	0.01	3.01	0.44	0.00	0.45	3.01
Housing construction, non-government sector	0.06	2.63	4.24	0.00	4.29	2.63
Government net current expenditures	0.10	0.26	0.00	0.00	0.10	0.26
Total investment spending, government sector	0.00	2.16	0.49	0.94	0.49	3.11

5 Tables showing taxes paid on a commodity basis can be found in Appendix B.

6 This study assumes that all sales taxes paid by businesses are reflected in the cost of their products and, therefore, ultimately paid by consumers. Imagine a reform of sales taxes that reduces the taxes paid on the cost of production but then adds it to the price paid by consumers. How then are businesses better off, since the price paid by consumers – the price that influences demand for their products – is unaffected? Businesses benefit through two effects. The first benefit is from higher export sales which rise because the cost of production – the export price – falls with the reduction in taxes paid on inputs. The second benefit is from a reduction in the cost of capital which encourages businesses to purchase more plant and equipment. An increase in plant and equipment makes workers more productive and the business more competitive.



The GST adds an average of \$0.58 to the cost of \$100 of new capital spending by business and the RST adds another \$4.07. The GST adds \$4.29 to the cost of new housing construction while the RST adds a further \$2.63. While tax paid on current government expenditures is low, the tax paid on new capital by governments is quite high: \$0.49 for the GST and \$3.11 for the RST. The hidden RST is a significant factor in the total cost of purchases for business and residential construction and government investment spending. The cost of the RST is also significant for business investment in machinery and equipment but is largely applied at the time of purchase rather than as a hidden business cost.

To help place these costs in context, **Table 2** shows how much sales tax each person pays on average in Ontario in 2008. The average person will pay \$666 in GST and \$961 in RST for a combined total of \$1,627. As noted earlier, this includes the cost of hidden taxes passed on to the consumer by business. These hidden costs amount to \$45 from the GST and \$65 from the RST.

**Table 2** also provides a comparison with taxes that would be paid under the OCC sales tax reform scenarios reviewed in this report. The first, HST option (Harmonized Sales Tax), would replace the RST with a sales tax harmonized with the federal GST at 13% (*RST rate of 8% plus GST rate of 5%*). Under this option, each person would pay an additional \$70 in tax each year. The decrease in taxes paid on durable and non-durable goods is exceeded by the increase in tax paid on semi-durable goods and services.

The second reform scenario, labelled OST-a, would also replace the RST with a value added sales tax harmonized with the GST at 13% (*RST rate of 8% plus GST rate of 5%*), but zero rates purchases of children's clothing, "clean" energy, labour intensive services and goods and services provided by the MASH sector *on the provincial portion of the tax only*. Under this option, each person would pay an additional \$14 in tax each year. This scenario lowers taxes paid on semi- and non-durable goods and services relative to the HST scenario.

**Table 2**

Sales Tax Paid per Person in Ontario in 2008					
	GST	RST	HST	OST-a	OST-b
	change from RST				
Total Taxes paid including Business Costs					
Personal expenditures, total	665.94	961.11	70.04	14.18	40.13
Personal expenditures, durable goods	141.74	250.65	-23.87	-23.87	-23.87
Personal expenditures, semi-durable goods	94.51	127.63	23.59	12.73	23.59
Personal expenditures, non-durable goods	176.26	274.02	-25.18	-28.40	-25.18
Personal expenditures, services	253.43	308.81	95.50	53.72	65.59
Taxes paid on Selling Prices					
Personal expenditures, total	620.44	896.14	64.73	17.22	64.29
Personal expenditures, durable goods	141.73	249.13	-22.37	-22.37	-22.37
Personal expenditures, semi-durable goods	94.50	126.33	24.88	14.02	24.88
Personal expenditures, non-durable goods	176.07	269.05	-20.49	-23.60	-20.49
Personal expenditures, services	208.14	251.63	82.70	49.17	82.26
Hidden Business Taxes Paid					
Personal expenditures, total	45.50	64.97	5.32	-3.04	-24.16
Personal expenditures, durable goods	0.01	1.52	-1.50	-1.50	-1.50
Personal expenditures, semi-durable goods	0.01	1.30	-1.29	-1.29	-1.29
Personal expenditures, non-durable goods	0.18	4.97	-4.69	-4.80	-4.69
Personal expenditures, services	45.29	57.18	12.80	4.55	-16.67

The final reform scenario, labelled OST-b, also replaces the RST with a value added sales tax harmonized with the GST at 13%, but zero rates the financial services industry for *the provincial portion of the tax only*. This reform option principally reduces the hidden business taxes paid on services and, when passed on to consumers, lowers the increase in sales taxes paid to \$40 per person.

## Methodology and Assumptions

This section of the report provides information on the methodology and assumptions employed to conduct this analysis. The sales tax reform proposals considered include (i) harmonizing the provincial sales tax with the GST and (ii) developing an Ontario Sales Tax that is harmonized with the GST but applied at a zero rate for selected commodities and industries.

The first step in the process is, however, to determine the impact of sales taxes on business costs and how these affect the prices paid by consumers for goods and services produced in Ontario<sup>7</sup>.

### The Impact of Sales Taxes on Business Costs

Business purchases of goods and services used in the production process are subject to sales taxes. These taxes become a part of the cost of production and are, ultimately, passed on in the sale price of the businesses goods or services. The purchaser of these goods and services is not, however, aware of the amount of sales tax hidden in the cost of their purchase. The amount of sales tax hidden in the cost of a good or service varies by industry and by type of tax.

**Table 3**

Taxable Proportions by Industry in Ontario					
	Federal GST	Ontario RST	Ontario HST	Ontario OST-a	Ontario OST-b
Crop and Animal Production	0.0%	1.5%	0.0%	0.0%	0.0%
Forestry and Logging	0.0%	10.4%	0.0%	0.0%	0.0%
Fishing, Hunting and Trapping	0.0%	8.3%	0.0%	0.0%	0.0%
Support Activities for Agriculture and forestry	0.0%	5.9%	0.0%	0.0%	0.0%
Mining and Oil and Gas Extraction	0.0%	4.3%	0.0%	0.0%	0.0%
Utilities	0.4%	2.4%	0.4%	0.4%	0.4%
Construction	0.0%	39.9%	0.0%	0.0%	0.0%
Manufacturing	0.0%	1.6%	0.0%	0.0%	0.0%
Wholesale Trade	0.0%	8.0%	0.0%	0.0%	0.0%
Retail Trade	0.0%	5.1%	0.0%	0.0%	0.0%
Transportation and Warehousing	0.8%	11.0%	0.8%	0.8%	0.8%
Information and Cultural Industries	0.1%	10.6%	0.1%	0.1%	0.1%
Finance, Insurance, Real Estate and Rental and Leasing	9.4%	4.2%	9.4%	9.4%	4.2%
Professional, Scientific and Technical Services	0.0%	7.3%	0.0%	0.0%	0.0%
Administrative and Support, Waste Management and Remediation Services	0.0%	8.9%	0.0%	0.0%	0.0%
Educational Services	0.0%	3.6%	0.0%	0.0%	0.0%
Health Care and Social Assistance	13.6%	8.3%	13.6%	0.0%	13.6%
Arts, Entertainment and Recreation	3.8%	10.4%	3.8%	3.8%	3.8%
Accommodation and Food Services	0.0%	3.9%	0.0%	0.0%	0.0%
Other services (except health care and social assistance)	0.0%	10.5%	0.0%	0.0%	0.0%
Operating, Office, Cafeteria and Laboratory Supplies	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, Entertainment, Advertising and Promotion	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation Margins	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Profit Institutions Serving Households	10.9%	7.0%	10.9%	10.9%	10.9%
Government Sector	2.0%	3.2%	2.0%	0.0%	2.0%
Total	2.1%	6.0%	2.1%	1.7%	1.3%

7 The methodology employed to estimate the impact of the GST, RST and other sales tax options on prices is discussed in more detail in Appendix C.

For profit businesses registered for the GST can claim input tax credits which refund the GST paid on these purchases. Other types of business entities, however, are not eligible for these refunds (or receive only a portion of the tax paid). The proportion of purchases by Ontario businesses subject to GST are shown in the first column of **Table 3**. The proportion is generally low because businesses can claim input tax credits for the GST paid on their purchases. As noted, some businesses cannot make these claims and so the proportion of purchases subject to GST is higher for the industries in which these businesses are most commonly found: finance, insurance and real estate; health care and social assistance; and non-profit institutions serving households.

Ontario's RST is paid by businesses and cannot be claimed back. The proportion of purchases subject to the RST varies widely by industry. The proportion of purchases by Ontario businesses subject to the RST are shown in the second column of **Table 3**. These proportions are generally higher than those for the GST. Industries with the highest proportion of taxed purchases include: construction; transportation and warehousing; information and cultural industries; other services; forestry and logging; and arts, entertainment and recreation.

The taxable proportions for the HST reform option are the same as those for the GST but are lower for both the OST-a and the OST-b reform options (see **Table 3**). In the OST-a option, municipal, education and health services are zero-rated for the Ontario portion of the sales tax. This allows these sectors to claim all of their input tax credits. Under the GST, these sectors are allowed to claim either none or just a fraction of the GST paid on their inputs. In the OST-b option, the financial services industry is zero-rated for the Ontario portion of the sales tax. The industry's taxable proportion does not fall to zero in this scenario because the province is assumed to levy a new tax on the industry to compensate for its loss of RST revenue.<sup>8</sup> For purposes of the analysis, the revenue from this new tax is lumped in with the Ontario sales tax revenue for this reform option.

A key component of this analysis involves understanding how these hidden taxes impact the cost of goods and services purchases by households for both daily spending and new housing and businesses in terms of the cost of new plant and equipment. Reform of Ontario's sales tax will have a material impact on these hidden costs as the current RST is eliminated and replaced with a new and, usually lower, Ontario sales tax. The overall taxable proportions for business costs are 6.0% for the RST compared to 2.1% for the GST.

<sup>8</sup> This arrangement mirrors the one adopted by the province of Quebec when they agreed to harmonize their sales tax with the GST.

This information is obtained by converting the industry information in **Table 3** into the equivalent information for goods and services purchased by households and businesses. The taxable proportions by industry were multiplied by Ontario's 2004 preliminary S-level make matrix, normalized by commodity, to estimate taxable proportions by commodity. **Table 4** shows the taxable proportions on commodities produced in Ontario for each type of sales tax. **Table 4** shows that the HST and OST reform options taxable proportions are lower than the RST taxable proportions for all commodities except: gross imputed rent; finance, insurance and real estate services; health and social services; and services provided by non-profit institutions serving households<sup>9</sup>.

**Table 4**

Taxable Proportions on Commodities Produced in Ontario						
	Federal GST	Ontario RST	Ontario HST	Ontario OST-a	Ontario OST-b	
Grains	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%
Forestry products	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	8.3%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.2%	2.9%	0.2%	0.2%	0.2%	0.2%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
Textile products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Hosiery, clothing and accessories	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Wood pulp, paper and paper products	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	0.1%	5.7%	0.1%	0.1%	0.1%	0.1%
Primary metal products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Machinery	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
Motor vehicles, other transportation equipment and parts	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Electrical, electronic and communication products	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%
Non-metallic mineral products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.1%	2.4%	0.1%	0.1%	0.1%	0.1%
Residential building construction	0.0%	39.9%	0.0%	0.0%	0.0%	0.0%
Non-residential construction	0.0%	39.9%	0.0%	0.0%	0.0%	0.0%
Repair construction	0.0%	39.9%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	0.9%	10.7%	0.9%	0.8%	0.9%	0.9%
Communications services	0.3%	10.6%	0.3%	0.3%	0.3%	0.3%
Other utilities	0.6%	3.1%	0.6%	0.3%	0.6%	0.6%
Wholesaling margins	0.0%	7.3%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	0.1%	5.4%	0.1%	0.1%	0.1%	0.1%
Gross imputed rent	9.4%	4.2%	9.4%	9.4%	4.2%	4.2%
Finance, insurance, and real estate services	9.1%	4.2%	9.1%	9.0%	4.1%	4.1%
Business and computer services	0.2%	7.2%	0.2%	0.1%	0.1%	0.1%
Education, tuition and other fees services	2.8%	4.0%	2.8%	1.6%	2.8%	2.8%
Health and social services	11.9%	7.6%	11.9%	1.1%	11.9%	11.9%
Accommodation services and meals	0.2%	4.1%	0.2%	0.1%	0.2%	0.2%
Other services	2.4%	8.2%	2.4%	2.4%	1.6%	1.6%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	10.9%	7.0%	10.9%	10.9%	10.9%	10.9%
Government sector services	2.0%	3.2%	2.0%	0.0%	2.0%	2.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	2.0%	3.2%	2.0%	0.0%	2.0%	2.0%
Total	2.1%	6.0%	2.1%	1.7%	1.3%	

9 Tables showing the effective tax rates on business costs by industry and commodity can be found in Appendix D.

## Taxable Proportions

With information on the impact of sales taxes on business costs we now turn to determining the impact of sales taxes on prices for consumer goods and services, and business, government and residential investment spending. As discussed in the previous section, this involves not only the impact of each sales tax on prices at the point of purchase but also the impact of sales taxes hidden in the cost of these goods and services as developed in *Table 4*.

The information in *Table 4* is combined with import leakage vectors to determine the domestic taxable proportions used in determining the impact on final demand prices. The reason for this adjustment is to account for imported goods and services purchased in Ontario that were not subject to these sales taxes during production. The import leakage vector used to adjust the RST taxable proportion includes both international and inter-provincial imports while for the GST the import leakage vector includes just international imports because the GST is a national tax.

*Table 5* shows the taxable proportions for each sector of the economy by tax. Taxable proportions are the proportion of spending for the particular sector of the economy subject to each tax. The taxable proportions on selling prices indicate the impact of each tax on prices at the point of sale. Total taxable proportions include taxes levied at the point of sale as well as the impact of taxes paid on goods and services produced in Ontario.

Taxable proportions vary widely by tax and by sector of the economy. Total taxable proportions for the GST range from a low of 2.0% on government spending to a high of 99.5% on durable consumer goods spending. The pattern is similar for Ontario's RST ranging from a low of 3.2% on government spending to a high of 110.0% on durable consumer goods spending. There are, however, some notable differences between these two taxes. Taxable proportions on business and government investment in machinery and equipment vary between 9.0% and 12.8% for the GST and between 37.6% and 57.5% for the RST; the RST, therefore, imposes significant costs on public and private investment spending. Taxable proportions for new housing construction, however, follow the opposite pattern with the taxable proportion for the GST at 85.9% exceeding the RST's taxable proportion of 32.8%. Finally, the taxable proportions for personal expenditure are generally higher for the GST than the RST with the exception of spending on durable goods.

**Table 5**

<b>Taxable Proportions by Tax and Sector in Ontario</b>					
	<b>GST</b>	<b>RST</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
<b>Total Taxable Proportion including Business Costs</b>					
Personal expenditures, total	52.6%	47.4%	50.9%	48.1%	49.4%
Personal expenditures, durable goods	99.5%	110.0%	99.5%	99.5%	99.5%
Personal expenditures, semi-durable goods	98.1%	82.8%	98.1%	91.0%	98.1%
Personal expenditures, non-durable goods	60.2%	58.5%	53.1%	52.4%	53.1%
Personal expenditures, services	34.5%	26.3%	34.4%	30.8%	31.9%
Business Investment	11.5%	50.9%	11.5%	11.5%	11.4%
Machinery and equipment, non-government sector	12.8%	57.5%	12.8%	12.8%	12.7%
Construction excluding housing, non-government sector	9.0%	37.6%	9.0%	9.0%	8.9%
Housing construction, non-government sector	85.9%	32.8%	85.9%	85.8%	85.2%
Government net current expenditures	2.0%	3.2%	2.0%	0.0%	2.0%
Total investment spending, government sector	9.8%	38.8%	9.8%	9.8%	9.8%
<b>Taxable Proportions on Selling Prices</b>					
Personal expenditures, total	49.0%	44.2%	47.4%	45.1%	47.4%
Personal expenditures, durable goods	99.5%	109.3%	99.5%	99.5%	99.5%
Personal expenditures, semi-durable goods	98.1%	81.9%	98.1%	91.0%	98.1%
Personal expenditures, non-durable goods	60.1%	57.4%	53.0%	52.4%	53.0%
Personal expenditures, services	28.4%	21.4%	28.4%	25.6%	28.4%
Business Investment	11.3%	37.7%	11.3%	11.3%	11.3%
Machinery and equipment, non-government sector	12.6%	56.4%	12.6%	12.6%	12.6%
Construction excluding housing, non-government sector	8.8%	0.0%	8.8%	8.8%	8.8%
Housing construction, non-government sector	84.7%	0.0%	84.7%	84.7%	84.7%
Government net current expenditures	0.0%	0.0%	0.0%	0.0%	0.0%
Total investment spending, government sector	9.8%	11.8%	9.8%	9.8%	9.8%

The taxable proportions for the HST are the same as those for the current GST with the one exception being for personal spending on non-durable goods (see the note on Special Treatment for Tobacco Products). The taxable proportions for the first Made-in-Ontario sales tax (OST-a) reform options are lower for consumer spending on semi- and non-durable goods and services and government spending on current goods and services than the current GST taxable proportions. Zero-rating financial services for the second Made-in-Ontario sales tax (OST-b) reform option reduces the taxable proportions for consumer spending on services, business investment and housing construction<sup>10</sup>.

10 Tables showing the taxable proportions by commodity for each tax can be found in Appendix E.

## Effective Tax Rates

The taxable proportions in **Table 5** can be converted to effective tax rates by dividing by the statutory tax rate for each tax. Statutory tax rates are those determined by legislation; such as the GST at 5% and the RST at 8%. Effective tax rates are an artificial construct that indicate the average tax rate paid on purchases by a particular sector of the economy. The total effective tax rate on personal expenditures is 2.6% for the GST and 3.8% for the RST (see **Table 6**). The total effective tax rate on personal spending for the HST (Ontario portion only) is 4.1% and falls to 3.9% for the OST-a reform option and 4.0% for the OST-b reform option.

$$\text{Effective Tax Rate} = \text{Statutory Tax Rate} \times \text{Taxable Proportion}$$

**Table 6**

Effective Tax Rates by Tax and Sector in Ontario					
	GST	RST	HST	OST-a	OST-b
<b>Total Effective Tax Rate including Business Costs</b>					
Personal expenditures, total	2.6%	3.8%	4.1%	3.9%	4.0%
Personal expenditures, durable goods	5.0%	8.8%	8.0%	8.0%	8.0%
Personal expenditures, semi-durable goods	4.9%	6.6%	7.8%	7.3%	7.8%
Personal expenditures, non-durable goods	3.0%	4.7%	4.2%	4.2%	4.2%
Personal expenditures, services	1.7%	2.1%	2.8%	2.5%	2.5%
Business Investment	0.6%	4.1%	0.9%	0.9%	0.9%
Machinery and equipment, non-government sector	0.6%	4.6%	1.0%	1.0%	1.0%
Construction excluding housing, non-government sector	0.5%	3.0%	0.7%	0.7%	0.7%
Housing construction, non-government sector	4.3%	2.6%	6.9%	6.9%	6.8%
Government net current expenditures	0.1%	0.3%	0.2%	0.0%	0.2%
Total investment spending, government sector	0.5%	3.1%	0.8%	0.8%	0.8%
<b>Effective Tax Rate on Selling Prices</b>					
Personal expenditures, total	2.5%	3.5%	3.8%	3.6%	3.8%
Personal expenditures, durable goods	5.0%	8.7%	8.0%	8.0%	8.0%
Personal expenditures, semi-durable goods	4.9%	6.6%	7.8%	7.3%	7.8%
Personal expenditures, non-durable goods	3.0%	4.6%	4.2%	4.2%	4.2%
Personal expenditures, services	1.4%	1.7%	2.3%	2.0%	2.3%
Business Investment	0.6%	3.0%	0.9%	0.9%	0.9%
Machinery and equipment, non-government sector	0.6%	4.5%	1.0%	1.0%	1.0%
Construction excluding housing, non-government sector	0.4%	0.0%	0.7%	0.7%	0.7%
Housing construction, non-government sector	4.2%	0.0%	6.8%	6.8%	6.8%
Government net current expenditures	0.0%	0.0%	0.0%	0.0%	0.0%
Total investment spending, government sector	0.5%	0.9%	0.8%	0.8%	0.8%



## Special Treatment for Tobacco Products

The Ontario retail sales tax is not levied on tobacco and tobacco products. Instead, the province levies a set of tobacco excise taxes on these products. These products are, however, subject to the GST. In 2004, the province collected \$1.4 billion in revenue from tobacco while the federal government collected \$0.3 billion in GST revenue (at a 7% GST rate).

This asymmetric treatment of tobacco poses a challenge for sales tax reform. Harmonization would, in principle, add a full 8% to the price of tobacco products because the provincial retail sales tax rate on these products is zero. This is a significant tax increase which – whatever its possible merits – is not an intended outcome from reform of Ontario's sales tax.

This study assumes that the province zero-rates tobacco products for all three reform options. This means that **no additional tax** is levied on these products beyond the existing tobacco excise taxes. The estimated revenue impacts are not distorted by an extra tax on tobacco and can, therefore, be viewed as conservative. In reality, the provincial government would be much more likely to levy the HST or OST on tobacco products and to lower the current excise taxes to either fully or partially offset the increase in costs.

## Simplifying Assumptions for the RST

The provincial retail sales tax's statutory tax rate for most – but not all – taxed products and services is 8%. In particular, the RST rates for the following products are:

- accommodation for periods of less than one month – 5%
- admissions over \$4 to places of amusement – 10%
- alcoholic beverages sold through licensed establishments – 10%
- alcoholic beverages sold through retail stores – 12%

The input-output data source used to produce this analysis was not, however, sufficiently detailed to accommodate the use of these specific rates. To simplify the analysis all taxed products were assumed to be taxed at a statutory rate of 8%. As a result, the taxable proportions in Table 5 are either too high or too low for the final demand categories affected by these products. The effective tax rates reported in Table 6 are, however, correct because the error in the taxable proportion is exactly offset by the error in the statutory tax rate for that category. The C<sub>4</sub>SE's economic analysis depends on our estimates of the effective tax rates for each final demand category and so is unaffected by this simplifying assumption.

## RST Exemption for Production Machinery and Equipment

Qualified manufacturing enterprises are exempt from paying provincial sales tax on production machinery and equipment. Businesses in other industries do not qualify for this exemption and the exemption only applies to just over half the machinery and equipment purchased by manufacturers. The exemption applies to “production” machinery and does not, in particular, apply to office equipment and highway motor vehicles.

The C<sub>4</sub>SE's economic model specifically accounts for the difference in tax treatment between the manufacturing and non-manufacturing sectors of the economy. Changes in tax treatment affect the cost of purchasing new capital and, therefore, investment demand by industry and also affect government revenues.

## The Impact of Sales Taxes on Prices

As noted earlier, sales taxes affect not only the price paid at time of purchase but also the cost of producing the goods and services. A detailed comparison of prices for the Status Quo and for each of the tax reform options can be conducted if we assume that the cost of production – excluding sales, excise taxes and duties – is not affected by changes in sales taxes. **Table 7** shows the purchase price before and after taxes by sector of the economy for the Status Quo and each of the tax reform options.

The selling price before sales taxes is assumed to be 100.0 under the Status Quo. The basic prices exclude sales, excise and duty taxes paid by business as part of the production process. Basic prices are assumed to remain fixed for all the scenarios. The selling price for each reform option reflects changes in sales taxes paid by business during production. Selling prices are reduced for all categories other than personal spending on services for the HST and OST-a reform options. Taxes paid at the point of sale are added to the selling price to determine the final purchase price after tax. Purchase prices, therefore, reflect both changes in taxes paid by business as well as taxes paid at the point of purchase.

**Table 7**

Prices by Sector in Ontario									
	Basic Price	Status Quo Selling Price	Status Quo Purchase Price	HST Selling Price	HST Purchase Price	OST-a Selling Price	OST-a Purchase Price	OST-b Selling Price	OST-b Purchase Price
Personal expenditures, total	94.15	100.00	105.33	100.02	106.10	99.99	105.89	99.90	105.76
Personal expenditures, durable goods	99.49	100.00	113.70	99.95	112.87	99.95	112.87	99.95	112.85
Personal expenditures, semi-durable goods	99.67	100.00	111.45	99.93	112.67	99.93	112.11	99.93	112.67
Personal expenditures, non-durable goods	92.10	100.00	104.87	99.92	106.68	99.92	106.62	99.92	105.95
Personal expenditures, services	93.20	100.00	103.08	100.09	103.69	100.03	103.43	99.89	103.40
Business Investment	97.76	100.00	103.57	98.99	100.45	98.99	100.45	98.98	100.44
Machinery and equipment, non-government sector	99.51	100.00	105.14	99.92	101.56	99.92	101.56	99.92	101.55
Construction excluding housing, non-government sector	94.23	100.00	100.42	97.10	98.20	97.10	98.20	97.09	98.19
Housing construction, non-government sector	94.14	100.00	104.13	97.53	108.25	97.53	108.25	97.48	108.20
Government net current expenditures	98.44	100.00	100.00	99.90	99.90	99.74	99.74	99.90	99.90
Total investment spending, government sector	95.88	100.00	101.42	97.88	99.13	97.88	99.13	97.88	99.13

**Table 8** compares prices in each of the reform scenarios with Status Quo prices. As noted, selling prices are, in general, lower after tax reform than in the Status Quo. The notable exception is for personal spending on services which are 0.1% higher than in the Status Quo scenario.

**Table 8**

Percent Difference from Status Quo Prices by Sector in Ontario						
	HST		OST-a		OST-b	
	Selling Price	Purchase Price	Selling Price	Purchase Price	Selling Price	Purchase Price
Personal expenditures, total	0.0%	0.7%	0.0%	0.5%	-0.1%	0.4%
Personal expenditures, durable goods	-0.1%	-0.7%	-0.1%	-0.7%	-0.1%	-0.8%
Personal expenditures, semi-durable goods	-0.1%	1.1%	-0.1%	0.6%	-0.1%	1.1%
Personal expenditures, non-durable goods	-0.1%	1.7%	-0.1%	1.7%	-0.1%	1.0%
Personal expenditures, services	0.1%	0.6%	0.0%	0.3%	-0.1%	0.3%
Business Investment	-1.0%	-3.0%	-1.0%	-3.0%	-1.0%	-3.0%
Machinery and equipment, non-government sector	-0.1%	-3.4%	-0.1%	-3.4%	-0.1%	-3.4%
Construction excluding housing, non-government sector	-2.9%	-2.2%	-2.9%	-2.2%	-2.9%	-2.2%
Housing construction, non-government sector	-2.5%	4.0%	-2.5%	4.0%	-2.5%	3.9%
Government net current expenditures	-0.1%	-0.1%	-0.3%	-0.3%	-0.1%	-0.1%
Total investment spending, government sector	-2.1%	-2.3%	-2.1%	-2.3%	-2.1%	-2.3%

The impact on purchase prices relative to the Status Quo depends on the sector of the economy and the sales tax reform option. The declines in prices are most noticeable for personal expenditures on durable and non-durable goods and business and government investment spending. Prices for housing construction rise in the HST and OST scenarios. Prices for personal spending are also somewhat higher as higher prices for services and semi-durable and non-durable goods offset declines for durable goods<sup>11</sup>.

## Economic Impact Methodology

The economic impact of each of the tax reform options was estimated using the C<sub>4</sub>SE's Provincial Economic Modeling System. The C<sub>4</sub>SE's Provincial Modeling System is a dynamic multi-sector regional economic model of the country. It includes a bottom-up set of macroeconomic models for the provinces, the territories and the rest of the world. The national model links economic activity in one region with activity in the other regions through trade. The provincial models include detailed income and expenditure categories and demographic and labour market information. The purpose of the modeling system is to produce medium- to long-term projections of the provincial economies and conduct simulation studies that require industry and demographic detail.<sup>12</sup>

The following adjustments to the modeling system were made to determine the economic impact of each tax reform option.

- The taxable proportions for each sector of economic activity were adjusted for each tax reform option based on the information in *Table 5*.
- The Ontario government is assumed to provide low income Ontarians with an Ontario Sales Tax Credit. The credit is assumed to be worth on average \$500 per household (in 2008 dollars) for the 15% of households with the lowest income in HST scenario and \$500 dollars for the 10% of households with the lowest income in the two OST scenarios. This credit costs the government \$370 million (in 2007 dollars) in the first year for the HST scenario<sup>13</sup> and adjusts in response to changes in the number of households and inflation over the simulation period. This credit would be in addition to the existing Ontario Property and Sales Tax Credit.

11 Tables showing prices by commodity for each tax reform option and the percentage difference from Status Quo prices can be found in Appendices F and G.

12 More information on the C<sub>4</sub>SE's Provincial Economic Modeling System can be found in Appendix H.

13 The cost of this tax credit falls to \$247 million (2008 dollars) in the first year for the OST tax reform options.

- Expected inflation is raised for the year the tax reform is introduced to reflect the anticipated increase in personal spending prices shown in *Table 8*.<sup>14</sup>
- The model's exogenous trend total factor productivity growth term is temporarily raised from 1.0% to 1.14% in the year the tax reform is introduced reflecting the increase in productivity arising from a higher capital stock in Ontario<sup>15</sup>.

While the federal government is a significant beneficiary of sales tax reform in Ontario, this analysis does not include an assumption that the province receives a temporary or permanent increase in transfer payments from the federal government.

The analysis does not take into account any costs to businesses to convert from the current sales tax system to a new system or the savings in administration and compliance costs from a single sales tax rather than the two taxes in place at the moment.

The analysis also does not consider the costs (or possible savings) to the government of eliminating the current RST collection and compliance budget and replacing it with a bureaucracy for the new sales tax.

## Sensitivity Analysis: Higher FDI and Sticky Prices

The economic impact of a change in tax policy is subject to a range of uncertainties surrounding the behaviour of the various participants in the economy. These uncertainties can have a significant affect on the behaviour of the economy: the number of jobs generated; the change in GDP; and the change in government revenue to name a few. This study examined the impact of an increase in foreign direct investment following tax reform and the impact of a slowed response of prices by businesses following a change in their costs.

Business leaders, economists and politicians argue that an improvement in the province's competitiveness is expected to encourage businesses from other jurisdictions to invest in Ontario. The OCC's proposed sales tax reform options lower the cost of purchasing new capital which improves Ontario's competitiveness. And new investment would increase both output and employment in the province.

14 It is possible, but unlikely, that prices in the economy are unable to adjust in response to an anticipated shift in tax policy. A scenario was run to examine the implications of this assumption. The assumed change in expected inflation boosts wages and incomes and leads to higher labour productivity: 0.21% relative to the HST reform option without the adjustment. This impact would be smaller for the two Made-in-Ontario sales tax reform options because their expected impact on consumer prices is lower.

15 The 14% increase in trend total factor productivity was determined by evaluating the change in the Solow residual from its Status Quo values. This assumption slightly raises output and income (less than 0.02%) and reduces employment through an increase in productivity in the short-term and has little impact after the first five years.

However, an important shortcoming of the C<sub>4</sub>SE's economic modeling system is its inability to determine the potential benefit to the province of Ontario from inbound investment that is attracted to Ontario because of its enhanced international competitiveness.

A review of the economic literature on the relationship between foreign direct investment and the cost of capital conducted by de Mooij and Ederveen (2001) found that foreign direct investment is estimated to rise 0.5% for each 1% decrease in the cost of capital<sup>16</sup>. While there is a clear consensus that lower taxes will attract investment, there is no consensus on the size of the impact. The range of estimates reported by de Mooij and Ederveen is very wide; so, in order to provide conservative estimates, this study uses just half the average impact reported by de Mooij and Ederveen: 0.25% for each 1% decrease in the cost of capital. Since this reform is permanent it leads to a permanently higher level of foreign direct investment in Ontario<sup>17</sup>.

However, not all these funds from new foreign direct investment will be used to construct new buildings or to purchase new equipment. This study assumes that just 10% to 15% of these funds are used to purchase new plant and equipment and this provides about an additional \$78 million in foreign (or out-of-province) direct investment a year based on the reduction in the cost of capital arising from the proposed sales tax reforms. Based on historical investment patterns in Canada, sixty percent of the new investment is assumed to go to the manufacturing sector with the remainder to the primary and services sectors. **Table 9** provides estimates of foreign direct investment and both total and foreign plant and equipment spending by industry sector in Ontario in the Status Quo and the estimated impact of sales tax reform on these measures<sup>18</sup>.

**Table 9**

<b>Impact of Sales Tax Reform on Foreign Direct Investment in Ontario</b>				
	<b>All Industries</b>	<b>Primary Industries</b>	<b>Manufacturing Industries</b>	<b>Service Industries</b>
<b>Billions of Dollars in 2010</b>				
Foreign Direct Investment	120.4	2.0	53.9	64.5
Foreign Plant & Equipment Spending	18.1	0.2	8.1	6.4
Total Plant & Equipment Spending	90.5	3.1	10.9	76.5
<b>Percent Change from Status Quo in the:</b>				
Cost of Capital		-2.1%	-2.1%	-2.1%
Foreign Direct Investment		0.5%	0.5%	0.5%
Foreign Plant & Equipment Spending		0.5%	0.5%	0.5%
<b>Change from Status Quo (millions of dollars)</b>				
Foreign Direct Investment	637	11	286	341
Foreign Plant & Equipment Spending	78	1	43	34
... measured in 2002 dollars	74	1	44	29

16 de Mooij, Ruud A. and Sjef Ederveen, *Taxation and foreign direct investment*, (The Hague: CPB Netherlands Bureau for Economic Analysis, 2001), p. 25.

17 While the increase in investment is permanent, the stock of foreign-owned capital adjusts towards a new, higher level but then remains at that level when the value of investment equals the increased value of depreciation for the stock of foreign-owned capital.

18 Only one set of impacts are shown because the impact of sales tax reform on the cost of new plant and equipment is almost identical across all three of the OCC's sales tax reform options.

The additional foreign direct investment stimulates the economy providing a positive, or optimistic, outcome relative to the tax reform scenario without the increase in investment. A more negative, or pessimistic, outcome can be expected if businesses do not adjust prices in response to changes in costs.

**Table 10**

Price Adjustment Assumptions for the "Sticky Price" Case									
	Personal expenditures, durable goods	Personal expenditures, semi-durable goods	Personal expenditures, non-durable goods	Personal expenditures, services	Machinery and equipment, non-government sector	Construction excluding housing, non-government sector	Housing construction, non-government sector	Government net current expenditures	Total investment spending, government sector
<b>Tax Reform Impact on Business Costs (Effective Tax Rate)</b>									
HST	-0.05%	-0.07%	-0.08%	0.09%	-0.08%	-2.99%	-2.54%	-0.10%	-2.16%
OST-a	-0.05%	-0.07%	-0.08%	0.03%	-0.08%	-2.99%	-2.54%	-0.26%	-2.16%
OST-b	-0.05%	-0.07%	-0.08%	-0.11%	-0.08%	-3.00%	-2.59%	-0.10%	-2.16%
<b>Year 1 Partial Price Adjustment (50%)</b>									
HST	0.03%	0.03%	0.04%	-0.05%	0.04%	1.49%	1.27%	0.05%	1.08%
OST-a	0.03%	0.03%	0.04%	-0.02%	0.04%	1.49%	1.27%	0.13%	1.08%
OST-b	0.03%	0.03%	0.04%	0.06%	0.04%	1.50%	1.29%	0.05%	1.08%
<b>Year 2 Partial Price Adjustment (80%)</b>									
HST	0.01%	0.01%	0.02%	-0.02%	0.02%	0.60%	0.51%	0.02%	0.43%
OST-a	0.01%	0.01%	0.02%	-0.01%	0.02%	0.60%	0.51%	0.05%	0.43%
OST-b	0.01%	0.01%	0.02%	0.02%	0.02%	0.60%	0.52%	0.02%	0.43%
<b>Year 3+ Price Adjustment (100%)</b>									
HST	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OST-a	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OST-b	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

The experience of the shift from the manufacturers' sales tax (MST) to the GST in 1991 and sales tax harmonization in Atlantic Canada and Quebec indicates that prices adjust quite quickly to reflect the change in the cost of business inputs. However, business may be slow to adjust prices for a variety of reasons: lack of competitive pressure; prices are set by long-term contracts; the cost involved in changing prices – especially if the change is small; the delay in accounting information reporting changes in costs – and profits; and, finally the desire for higher profits (or to preserve market share if costs have risen).

**“Business leaders, economists and politicians argue that an improvement in the province’s competitiveness is expected to encourage businesses from other jurisdictions to invest in Ontario. The OCC’s proposed sales tax reform options lower the cost of purchasing new capital which improves Ontario’s competitiveness. And new investment would increase both output and employment in the province.”**

A “sticky price” case was generated for each sales tax reform option in which prices were assumed to react by only one half the change costs resulting from the shift in business taxes in the first year and by eighty percent in the second year (see [Table 10](#)). The change in business costs was assumed to be fully passed on to final purchasers by the third year.

Prices in the first two years following tax reform are, therefore, higher in the “sticky price” case than would be the case if prices adjusted fully to reflect changes in business costs. The exception to this is for personal spending on services where business costs rise as a result of sales tax reform (except for the OST-b reform option). In these cases competitive pressure is assumed to prevent these businesses from immediately passing on higher costs to their customers.

The analysis reported in the next sections provides a range of potential economic impacts resulting from each of the sales tax reform options. In general, the “sticky price” case provides the weakest potential outcome while the additional FDI case provides the strongest potential outcome. A stronger response of FDI to Ontario’s tax reform than the relatively conservative one adopted for this study would, however, produce more positive impacts than those reported here.

**“The experience of the shift from the manufacturers’ sales tax (MST) to the GST in 1991 and sales tax harmonization in Atlantic Canada and Quebec indicates that prices adjust quite quickly to reflect the change in the cost of business inputs.”**



## Economic Impact of Sales Tax Reform

The benefits arising from reform of Ontario's sales tax system accrue to all key stakeholders in the economy: households, business and governments. First, households stand to benefit from higher incomes and higher spending. Second, businesses benefit from lower operating and capital costs which enhances their competitiveness. Finally, governments improve the standard of living for people in the province and raise additional revenues from the increase in economic activity<sup>19</sup>.

### Interpreting the Results

The economic impact of each sales tax reform option can be expressed in terms of its impact on GDP (the value of goods and services produced in Ontario), prices and other concepts. This is typically done by comparing the value of these measures after the policy reform with their values before the policy reform was implemented – the Status Quo. The impact is expressed as either the percent or absolute difference in the level of the measure after tax reform relative to its level at that time in the Status Quo scenario.

It is important for the reader to note that the measures in the tables and charts continue to grow over time – but they do so at either a greater or lesser rate than they would have in the Status Quo. It is only the difference in outcomes relative to the Status Quo that is reported in the tables not the actual level or growth of economic activity. The reader should also note that the impacts reported at a particular point in time represent the change in the economy relative to the Status Quo at that time and are not a cumulative or discounted impact.

**“Households stand to benefit from higher incomes and higher spending. Businesses benefit from lower operating and capital costs which enhances their competitiveness. Governments improve the standard of living for people in the province and raise additional revenues from the increase in economic activity.”**

19 A set of detailed economic impact result tables can be found in Appendix I.

## Direct Impact on Sales Tax Revenue

The direct impact provides an initial estimate of the cost to the provincial government of each sales tax reform option. It estimates the change in sales tax revenue based on the change in tax rates and proportions but holds spending valued at selling prices fixed at Status Quo levels. It differs from the total impact on government revenue in the sense that spending is affected by the change in tax policy. This distinction is important because there is a large difference between the actual – or total – change in government revenue resulting from these policy initiatives and the direct impact reported in this section. Increases in economic activity following implementation of sales tax reform will allow governments to recover some, if not all, of the estimated direct loss of revenue.

The direct impact on Ontario government revenue varies from a gain of \$415 million for the HST option to a decline of \$491 million for the first Made-in-Ontario sales tax reform option (see [Table 11](#)). The direct impact of sales tax reform varies widely by sector and across the reform options with the impact on revenue from personal expenditure being the most variable across the reform options.

In addition to the change in tax revenue, the Ontario government is also assumed to fund an Ontario sales tax credit for low income households to help offset the costs associated with tax reform. The cost of this program is incremental to the government's existing property and sales tax credit and is assumed to cost \$370 million for the HST reform option and \$247 million for the OST reform options. The combined direct impact on provincial government finances is a gain of \$45 million for the HST reform option and a cost of \$737 million and \$240 million for the OST-a and OST-b reform options respectively.

**Table 11**

Direct Impact of Sales Tax Reform on Ontario Sales Tax Revenue (millions of 2008 dollars)			
Change in Sales Tax Revenue:	HST	OST-a	OST-b
Personal Expenditure	905	183	518
Business Investment	-1,643	-1,643	-1,647
Residential Investment	1,620	1,620	1,601
Government Investment	-354	-354	-354
Government Expenditure	-112	-296	-112
Total	415	-491	6
% Change	2.5%	-3.0%	0.0%
Change in Provincial Gov't Transfers:	HST	OST-a	OST-b
~~~~~	370	247	247
Average Transfers per Person (\$)	28.63	19.09	19.09
<b>Total Direct Cost to the Provincial Government (millions of 2008 dollars)</b>	<b>45</b>	<b>-737</b>	<b>-240</b>
Memo Item:	HST	OST-a	OST-b
Personal Expenditure per Person (\$)	70.05	14.19	40.14
Total per Person (\$)	32.14	-37.98	0.47

**“Increases in economic activity following implementation of sales tax reform will allow governments to recover some, if not all, of the estimated direct loss of revenue.”**

The additional direct cost in terms of sales tax revenue of the Made-in-Ontario tax reform options can be attributed to each of the categories of spending eligible for a reduced rate of tax. **Table 12** shows the total cost, in millions of 2008 dollars, of reducing the OST tax rate from 8% to 0% in total and for each category of spending considered in this study. The additional direct cost of eliminating the OST on the specified commodities is \$3.4 billion or \$264 per capita. The total cost of eliminating the tax on new housing costs \$2.1 billion, followed by financial services at \$409 million and labour intensive services at \$384 million. The high cost of eliminating or reducing the sales tax in these areas led to their exclusion from the OST-a reform package reviewed in this study. The OST-b reform option examines the economic impact of zero-rating the financial services industry.

**Table 12**

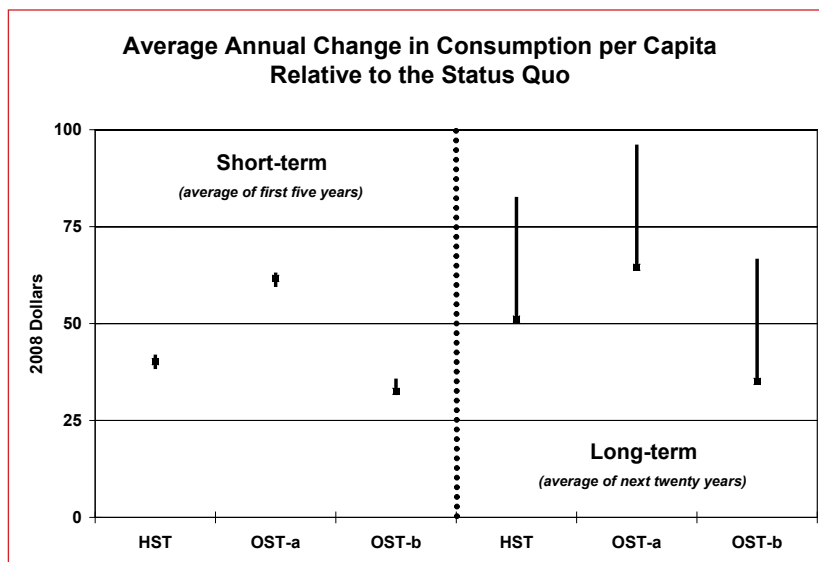
Direct Cost of Ontario Sales Tax Exemptions			
	Total Cost	Cost per Point of Tax	Cost per Capita
	(millions of 2008 dollars)		(2008 dollars)
Total	3,406	426	264
Children's Clothing	140	18	11
Clean Energy	40	5	3
Financial Services	409	51	32
Labour Intensive Services	384	48	30
New Housing	2,091	261	162
MASH	341	43	26

**Table 12** also shows the direct cost per point of tax in millions of 2008 dollars and the direct cost per capita in 2008 dollars.

## Benefits to Households

The benefits to households in Ontario arising from sales tax reform can be seen clearly in **Figure 3**. Per capita consumption (adjusted for inflation) rises relative to what it would have been under the Status Quo. The increase in spending is relatively modest over the first five years – \$40 per person each year – but rises to between \$50 and \$80 per person each year over the long-term. The increase in FDI is responsible for the higher estimated impact in the long-run while the lower impact is the same for both the sticky price case and the case excluding additional FDI.

The benefits to the household are greater under the OST-a reform option than the HST and OST-b reform options as they enjoy the benefits of a reduced tax rate on children's clothing, clean energy, labour intensive services and services provided by the MASH sector. The OST-b reform option, in particular, yields the lowest – although still positive – benefits to households.

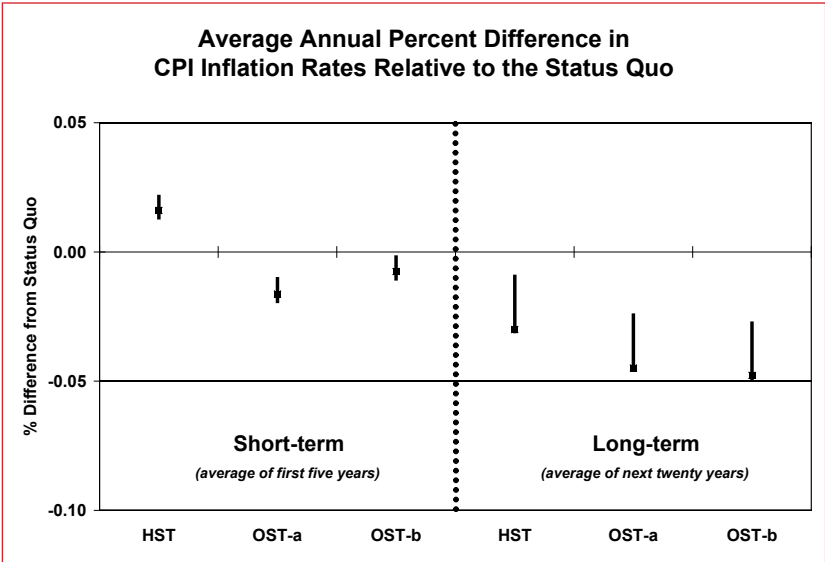
**Figure 3<sup>20</sup>**

As noted earlier, the proposed tax reform options lead to an increase in prices paid by households for some goods and services. The effect on prices is seen immediately following the tax reform and leads to an increase in consumer price index inflation of between 0.01% and 0.02% a year for the HST reform option (see [Figure 4](#)). While this increase is real, it would be swamped by other economic forces influencing inflation in Ontario and would be very difficult for anyone to discern. In the short-term, consumer price inflation slows marginally for both the OST-a and OST-b reform options.

Over the longer-term, the impact of tax reform is to reduce the rate of consumer price inflation. Inflation is lower than it would have been under the Status Quo because of the benefits of higher productivity and improved international competitiveness. The impact of additional FDI raises inflation in the long-run because of the increased economic activity arising from the new investment in Ontario. In all cases, however, the impact on the annual inflation rate is small.

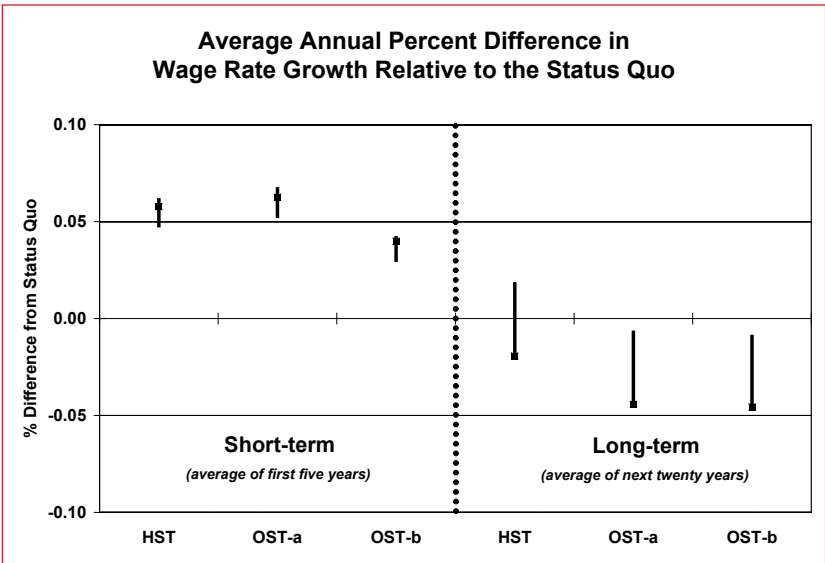
20 The figures displayed in this section present the economic impacts, relative to the Status Quo scenario, over the short-term and long-term for each of the three reform options discussed in this paper. A range of potential impacts for each sales tax reform option is shown by the top and the bottom of the vertical line. The box shown on the line represents the impact of the median case – usually the case excluding additional FDI and sticky prices.

Figure 4



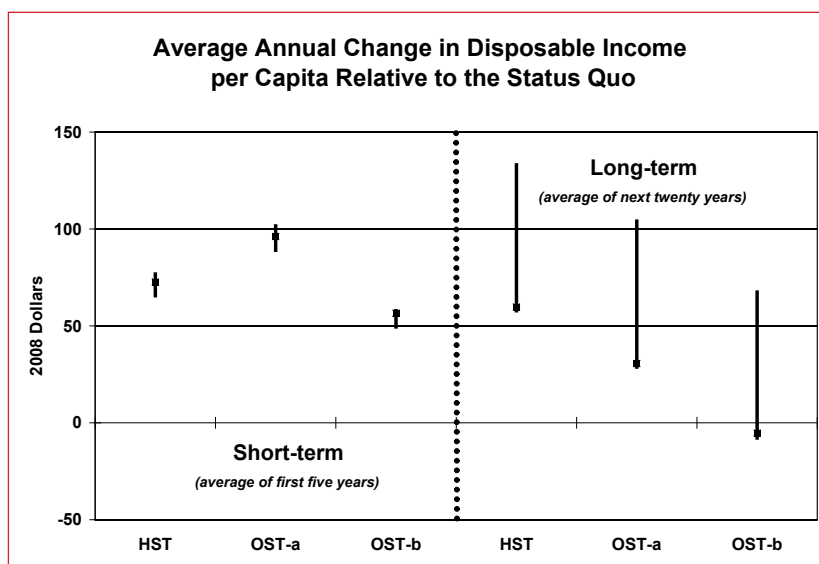
The OST reform packages reduce inflation more than the HST reform option because of the tax exemptions provided for purchases of children’s clothing, clean energy, labour intensive services and services provided by the MASH sector in the OST-a case and the reduction in financial services costs for the OST-b case.

Figure 5



Although consumer prices rise, wages rise by more leaving workers better off and, therefore, able to spend more on goods and services (see [Figure 5](#)). A key assumption in the analysis is that workers (and businesses) know that tax reform is going to be introduced and anticipate its impact on prices. Nominal wage growth rises by less than 0.1% a year in the short-term boosted by higher productivity and the knowledge that prices will rise following tax reform. Over the long-run, nominal wage growth responds in a similar way to CPI inflation with the additional FDI case leading to faster wage growth than the other two cases.

**Figure 6**



Faster real wage growth provides an increase in disposable income relative to the Status Quo of about \$50 to \$100 per person each year in the short-run from the three reform options (see [Figure 6](#)). Over the long-run the increase in per capita disposable income remains positive for all but the OST-b reform option excluding the additional FDI. The ability of Ontario to attract new investment following tax reform has a significant impact on the long-run benefit to households in terms of income and consumption.

In summary, households will experience immediate benefits in terms of higher incomes and consumption despite the small overall increase in prices following any of the tax reform options proposed by the OCC. These benefits will persist and grow over time although the extent of the increase depends on Ontario's ability to attract new investment.

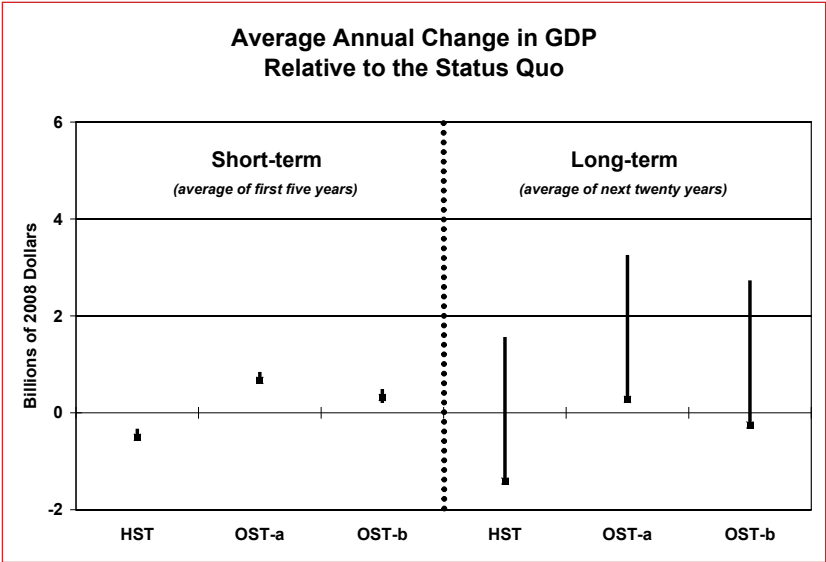
Benefits to Business

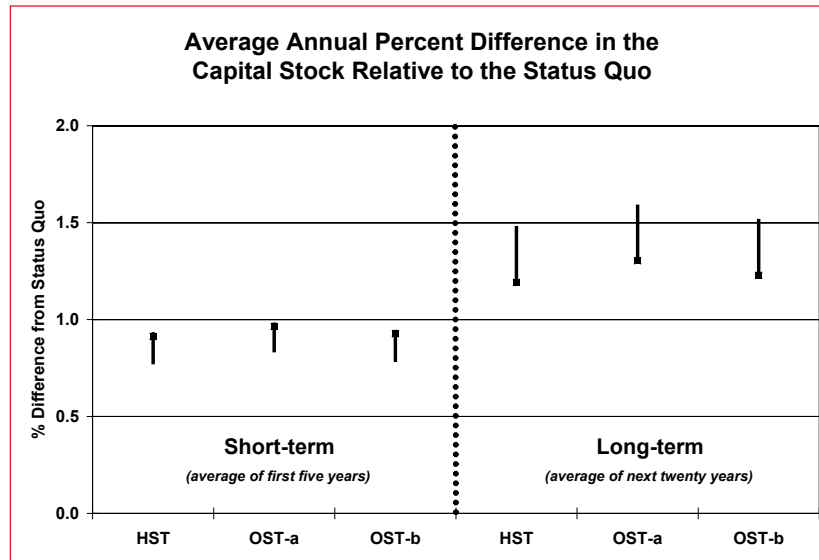
The immediate benefits to business of the OCC’s tax reform options include a decrease in operating costs and a decrease in the cost of new plant and equipment. The long-run benefits to business arise from a more productive and competitive economy arising from their increased spending on capital.

**Figure 7** shows that the short-term change in real GDP varies between a decline of \$0.5 billion for the HST reform option to a gain of \$0.8 billion for the OST-a reform option with additional FDI. The small and ambiguous impact on the overall size of the economy is due to the assumption that businesses substitute new capital (investment) for labour. The reduction in the cost of capital ensures that overall production costs are lower – despite the increase in the real wage for labour – but total output is determined by demand conditions which vary from slightly weaker to slightly stronger in the short-term depending on the reform option.

Over the long-term, the economic impact depends on the ability of the Ontario economy to attract new investment from outside the province as a result of the reduction in our cost of capital. If yes, then GDP is expected to rise by between \$1.5 and \$3.2 billion. If no, then GDP would fall \$1.4 billion from Status Quo levels in the HST scenario and remain near Status Quo levels for the two OST reform options.

Figure 7



**Figure 8**

A small decline in GDP relative to the Status Quo should not, however, be viewed negatively because – as will be seen shortly – Ontario’s economy is significantly more productive. Ontario produces the same value of goods and services using less labour. In an environment of looming labour shortages the benefits of this outcome should not be discounted.

As expected, the decrease in capital costs boosts investment spending and raises the capital stock (see [Figure 8](#)). The value of the capital stock rises about 1% above Status Quo levels in the short-run and by between 1.25% and 1.5% over the long-run. The increase is greater in the case with additional foreign direct investment spending. The increase in the capital stock is higher in the OST-a reform option scenario than for the other reform options because of the increase in demand for the zero rated goods and services.

**“Business in Ontario benefits from tax reform through a reduction in the cost of capital. This stimulates an increase in investment. The increase in capital boosts productivity and improves the competitive position of business in the province.”**



Figure 9

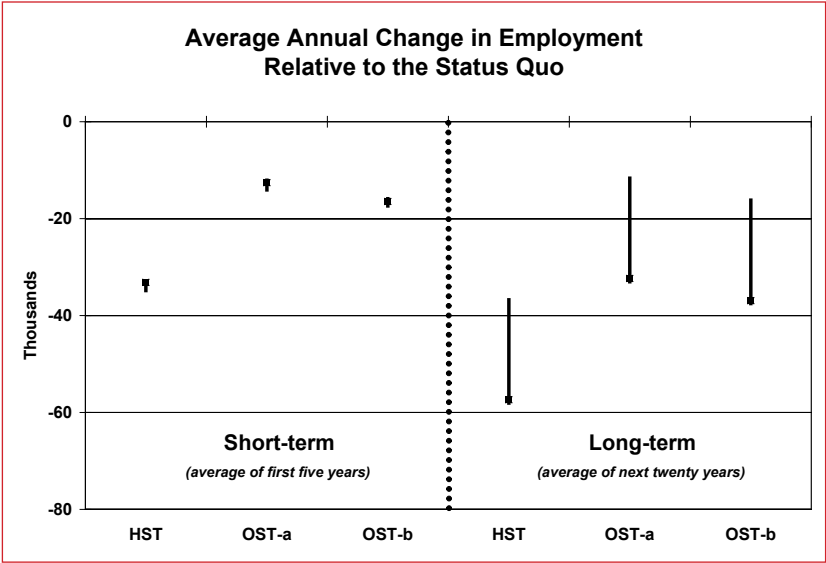
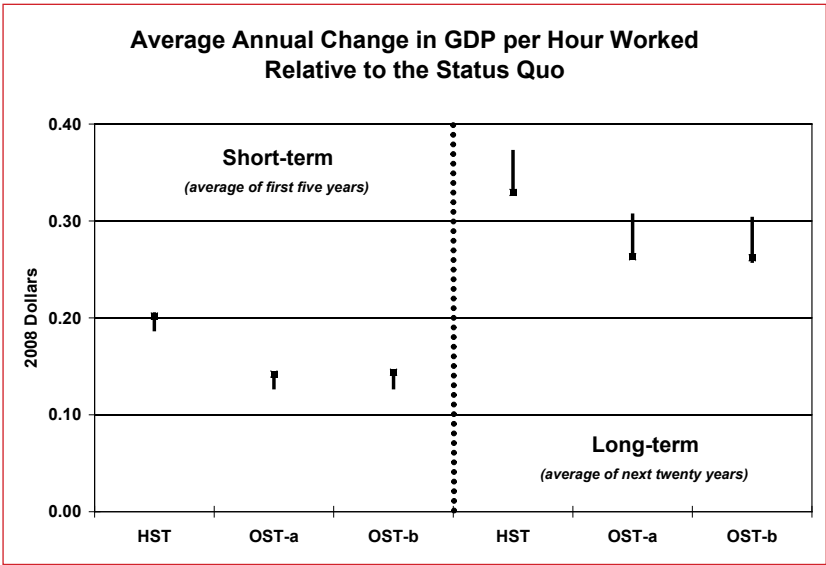


Figure 10



The OCC's sales tax reform options reduce the average rate of growth in employment from 0.6% a year (assumed in the Status Quo over the next twenty five years) by a maximum of 0.03% a year. It is important to note that the level of employment does not decline as a result of tax reform – it just rises a little more slowly than assumed in the Status Quo outlook. In the short-run, the impact of sales tax reform is to slow employment growth by between 10 and 40 thousand jobs for all three options (see **Figure 9**) relative to the Status Quo as businesses substitute capital for labour in the production of goods and services. Over the long-run, continued productivity growth precludes any increase in employment relative to the Status Quo. The reduction in employment growth is, however, lower in the case with additional foreign direct investment spending.

**Figure 10** shows the impact of the tax reform options on labour productivity (GDP per hour worked). In the short-run workers produce \$0.20 more per hour in the HST reform option and \$0.13 more per hour for the two OST reform options. The increase is lower for the OST reform options because the economy is diverting spending and resources toward the exempt goods and services.

Over the long-run, labour productivity continues to improve by between \$0.25 and \$0.37 an hour worked. The biggest increase is observed in the cases with higher foreign direct investment for each reform option. Again, the OST reform options yield smaller benefits than the HST reform option.

In summary, business in Ontario benefits from tax reform through a reduction in the cost of capital. This stimulates an increase in investment. The increase in capital boosts productivity and improves the competitive position of business in the province.

## Benefits to Governments

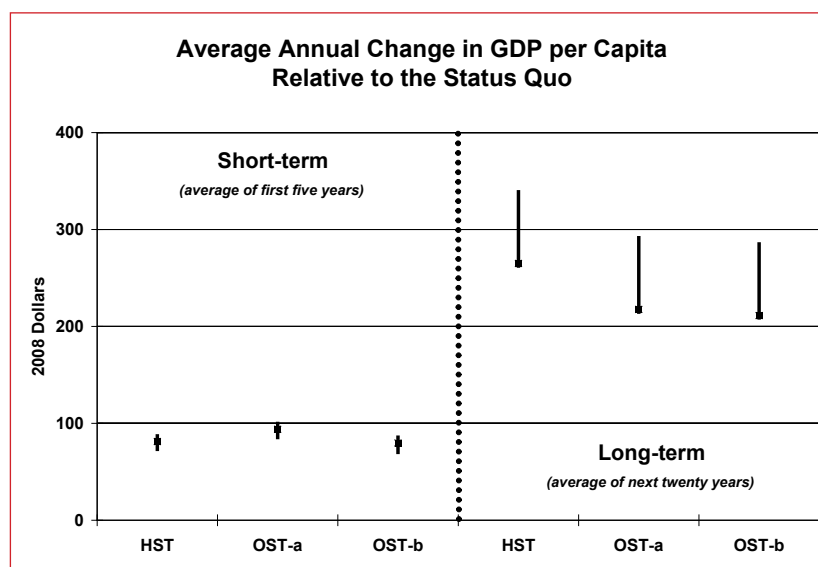
In principle, governments are concerned about the welfare of the residents in their jurisdiction. A common measure of welfare used by economists is GDP per capita or the standard of living. **Figure 11** shows the impact on Ontario's standard of living as a result of the OCC's proposed tax reform options. The short-term impact is between \$70 and \$100 per person per year and rises to between \$210 and \$340 per person over the long-term. The impacts with additional FDI exceed the other two case impacts due to the benefit of increased foreign direct investment spending in Ontario.

The OST-a reform option impacts are a little stronger than the impacts for the other two reform packages in the short-run but this is altered in the long-run as the HST impacts exceed the two OST reform option impacts. In all cases, Ontario's standard of living is improved relative to the Status Quo.

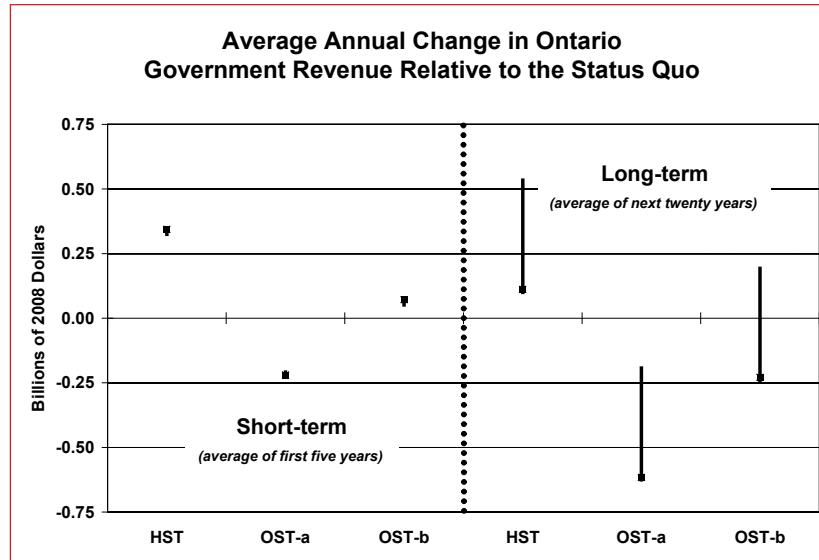
The Ontario government's fiscal position has little spare capacity to accommodate tax cuts or other measures that reduce the province's revenue. **Figure 12** shows the short-run impact of the HST reform option would result in an increase in provincial government revenues of between \$325 and \$345 million a year<sup>21</sup>. The short-run impact of the OST-a reform option is, not surprisingly, worse with provincial government revenues falling by between \$208 and \$220 million a year and the impact of the OST-b reform option lies between the two yielding an increase in revenues of between \$50 and \$70 million a year. The total change in provincial government revenues for all reform options is, however, significantly stronger than the direct costs reported in **Table 11** as increases in economic activity lead to partial recovery of the direct revenue loss.

Over the long-run the HST sales tax reform options yields an increase in provincial government revenues of between \$100 million to \$534 million with the benefit of additional FDI. The tax exemptions provided in the OST-a reform option lead to a permanent decline in provincial government revenues of between \$200 and \$600 million a year depending on whether additional FDI is included or not. Again, the OST-b reform option lies between the other two reform options with the impact being either a loss of \$240 million a year excluding additional FDI or a gain of \$200 million a year with additional FDI.

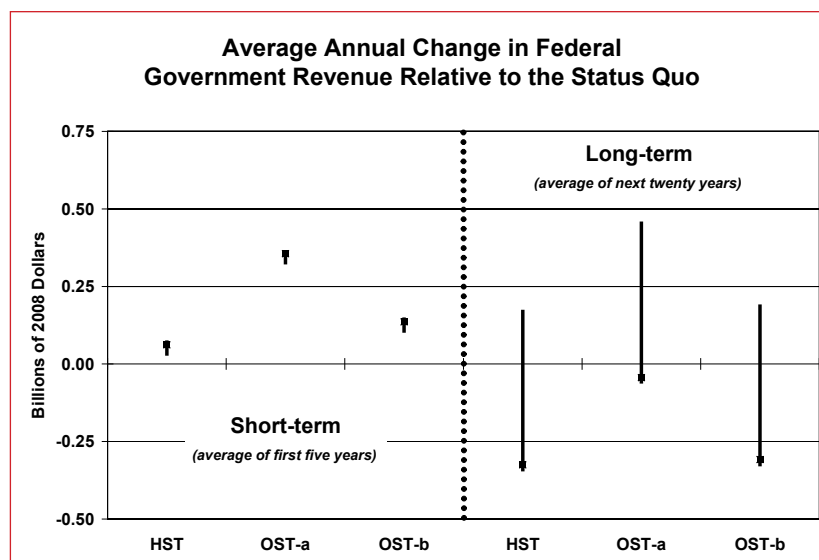
**Figure 11**

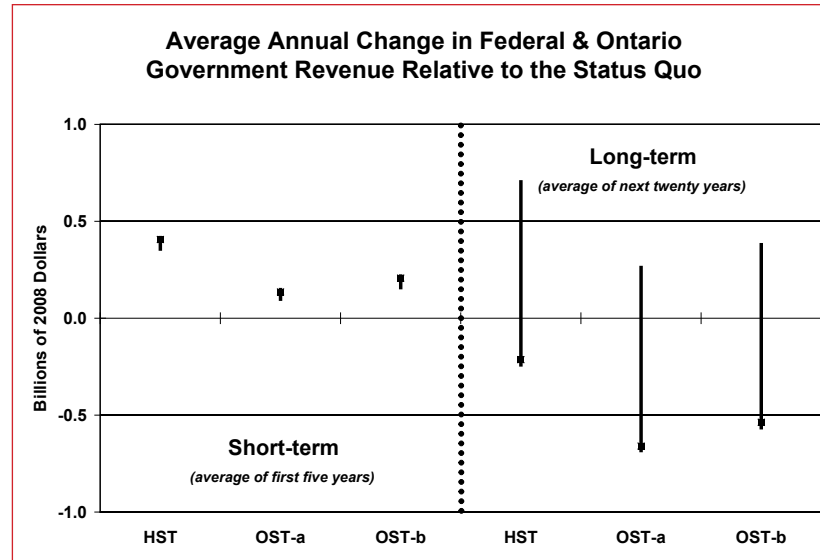


21 The reader should note that government revenues are expressed in inflation adjusted 2008 dollars to remove the effects of changes in inflation rates across the scenarios.

**Figure 12**

Combining the impact on both federal and provincial government revenues yields a generally positive picture. **Figure 13** shows that the impact on federal government revenues collected in Ontario is positive in the short-term for all three reform options – with an average annual impact of between \$30 million and \$360 million. Over the long-run, the impact is slightly negative without the benefit additional FDI and positive with it included.

**Figure 13**

**Figure 14**

**Figure 14** shows that the short-run impact on consolidated federal and provincial government revenues is positive for all three reform options. In the short-run, consolidated government revenues are higher than the Status Quo by between \$100 and \$415 million a year. The impact of additional FDI raises the combined impact by about \$10 million a year while sticky prices reduce it by about \$40 to \$50 million a year.

In the long-run, consolidated government revenues are higher than the Status Quo by between \$250 and \$700 million a year in the case with additional FDI and lower by between \$240 and \$680 a year for without it. The fiscal impacts are generally stronger for the HST reform option and weakest for the OST-a reform option.

The implication of **Figure 14** is that the federal government could design a short-term compensation package for the Ontario government that would leave both governments at least no worse off in the short-run for any of the three tax reform scenarios.

**“The federal government could design a short-term compensation package for the Ontario government that would leave both governments at least no worse off in the short-run for any of the three tax reform scenarios.”**

In summary, the impact on provincial government revenues could be neutral or positive in the short-run provided a compensation package could be negotiated with the federal government. In the long-run the fiscal impact will be positive provided the province attracts additional foreign direct investment. A benefit that has not been specifically measured is the benefit to local governments, schools and hospitals from a reduction in taxes paid on their purchases of goods and services

and spending on new capital. This has become an increasingly important issue to municipalities across the province faced with mounting infrastructure deficits. Finally, it should be remembered that the proposed tax reform options help raise the standard of living in the province – a key policy outcome for all levels of government.

## Conclusions and Observations

This analysis demonstrates that reducing the cost of capital boosts investment and raises productivity and the standard of living in Ontario (typically defined as real GDP per capita). Households are at least as well off with per capita consumption higher than in the Status Quo and with higher disposable income and savings in almost all scenarios. It also demonstrates that the provincial government can introduce tax reform without risk to its fiscal position – provided tax breaks are kept to a minimum. A modest compensatory fund provided by the federal government would ensure a positive outcome for the provincial treasury.

The cost of tax cuts offered in the OST-a tax reform option falls, however, squarely on the province's bottom line as increases in economic activity only recover part of the lost income. This reform option provides households with the biggest increase in per capita consumption and the lower growth in employment but is otherwise outperformed by one or more of the other reform options.

The OST-b reform option maintains the same tax burden on the financial services as the Status Quo. This policy option yields the weakest impacts of the three reform options for households in terms of per capita consumption and disposable income. The increase in labour productivity is the same as for the OST-a reform option, but is less than the HST reform option. The increase in per capita GDP is again the lowest of all three reform options but the impact on provincial government revenues is slightly positive and well above the losses sustained in the OST-a reform option.

**The economic argument for harmonization is compelling. There are very few policy options available to the Ontario government that could yield such results: a per capita tax increase of \$32 yields a long-term increase in per capita GDP, productivity, household income and consumption, and Ontario government revenue.** In the short-term, provincial government revenues rise by about \$50 a year (2008 dollars per person) relative to the Status Quo. Over the long-run, provincial government revenues rise by \$72 per person per year without additional FDI and by \$84 with additional FDI.

Ontario's households, business and government can all experience a win-win-win outcome from the reform of Ontario's sales tax. Higher incomes, lower prices, increased competitiveness and higher tax revenues characterize the broad economic outcome from sales tax reform. Beyond these benefits, however, are:

- the potential to encourage a green agenda through targeted sales rate reductions or exemptions;
- support for low income families through an Ontario sales tax credit that would reduce the regressivity of the proposed sales tax;
- a reduction in the burden to small business of sales tax compliance and the potential to encourage certain sectors through targeted sales rate reductions or exemptions;

- greater transparency in pricing for consumers with a reduction in the amount of “hidden” taxes paid;
- a reduction in the complexity and burden of sales taxes on Ontario’s trade with other provinces;
- and finally, the support reform would provide to cities and regions as they tackle infrastructure renewal throughout the province.

**“Ontario’s households, business and government can all experience a win-win-win outcome from the reform of Ontario’s sales tax.”**

With Ontario facing the challenges of a global recession, a volatile Canadian dollar and unstable commodity prices, manufacturing plant shutdowns and relocations, financial sector turbulence, and labour market shortages, the need to reform Ontario’s sales tax system could not be greater. Public policy can make a difference. It is time to tax smarter for our prosperity.



## Appendix A: OST Exemptions

The OCC proposals for sales tax reform include a reduced or zero rate for the OST for a select set of commodities. The following set of commodities were considered in this analysis:

- Children's clothing
- "Clean" electricity generation and/or fuel
- Financial services (banks, insurance, securities dealers)
- Labour intensive services (hairdressing, domestic care, small repairing, renovations, and cleaning services to households)
- New housing
- Municipal sector
- Academic sector
- Schools
- Hospitals

Analysis was conducted reducing the sales tax rate for each of these categories in order to determine a tax reform package that best met the OCC's objective criteria of a win-win-win outcome for business, households and the government. In particular, the OST-a scenario discussed in this report zero-rates children's clothing, "clear" electricity generation, labour intensive services, and the municipal, academic, schools and hospitals sector for the Ontario portion of the sales tax. The OST-b scenario examines the impact of zero-rating the provincial portion of the sales tax for the financial services industry.

Each policy alternative was modeled by altering the taxable proportion for the broader spending category included in the model to reflect the lower rate on the specific commodity.

## Children's Clothing

The Ontario government estimates the current exemption on children's clothing costs \$140 million a year<sup>22</sup>. This reduces the taxable proportion for personal spending on semi-durables to 91.0% from 98.1% in the HST reform option. These taxable proportions are all higher than the equivalent taxable proportion for the RST which is 82.2%.

## "Clean" Electricity Generation and/or Fuel

The Ontario government's target for "clean" electricity generation for the province is 10% of total generating capacity by 2010. Although no specific date for implementation of sales tax reform is included in this report, it is not expected to be implemented before 2010. This analysis, therefore, assumes a 10% clean energy proportion throughout the simulation.

Clean power's share of personal spending on non-durables for the broader other utilities category is 8.8%. Reducing the tax rate to 4% from 8% reduces the taxable proportion for this category of spending to 95.6% from 100.0% in the HST scenario. Eliminating the tax on clean electric power lowers the taxable proportion to 91.2%. These taxable proportions are all higher than the equivalent taxable proportion for the RST which is 0%.

## Financial Services

Converting the financial services sector from tax exempt to zero rated has implications not only for the financial services sector but also for business operating costs as well as household spending and business and government spending on plant and equipment. Reducing this benefit, however, is a tax levied by the province on the industry to compensate it for the loss of RST revenue. The compensating tax is designed so that the direct impact on the province and the industry is revenue neutral. This arrangement mirrors the one adopted by the province of Quebec when they agreed to harmonize their sales tax with the GST.

## Labour Intensive Services

A reduced or zero OST rate was applied to the following labour-intensive services selected from Statistics Canada's list of W-level input-output commodities:

<sup>22</sup> Published in The Ontario Fiscal and Economic Review 2008, Annex V: Transparency in Taxation, 2008 available at [www.fin.gov.on.ca](http://www.fin.gov.on.ca).

Other repair and maintenance (excludes automotive repair and maintenance)

- Laundry and dry cleaning services
- Barber and beauty services
- Funeral services
- Child care, in the home
- Private household service
- Other personal care services

These commodities represent 30.5% of personal spending on services for the broader other services category. Reducing the tax rate to 4% from 8% reduces the taxable proportion for this category of spending to 62.0% from 73.1% in the HST scenario. Eliminating the tax on labour intensive services lowers the taxable proportion to 50.8%. These taxable proportions are all higher than the equivalent taxable proportion for the RST which is 26.7%.

## New Housing

Lowering the OST rate to 4% from 8% reduces the taxable proportion for residential building construction to 42.2% from 84.4% in the HST scenario. Eliminating the tax on new housing lowers the taxable proportion to 0% - which is its taxable proportion under the RST.

It is important, however, to remember the cascading nature of the RST. The total taxable proportion from the RST on new housing construction is 35.1%, which is considerably higher than the 3.4% taxable proportion in the OST-b reform scenario.

## MASH Sector

HST taxable proportions for the Municipal government, Academic, Schools and Hospitals sector (MASH) are 10.3% for personal spending on education, tuition and other fees and 5.0% for personal spending on government services. These taxable proportions are reduced in the first, OST-a, Made-in-Ontario sales tax scenario and these sectors are zero-rated thus eliminating the Ontario tax paid on inputs. The RST taxable proportions for consumer spending on this sector are 0% but are non zero for the materials purchased by the organizations in this sector.

## Appendix B: Tax Revenue by Commodity

This appendix provides tables showing the amount of sales tax paid on \$100 of spending (valued at prices before taxes) for the GST and RST for both the taxes paid at the time of purchase as well as the value of taxes buried in the purchase price. The tables assume that \$100 is spent on each commodity. The tables are arranged by sector of economic activity as follows:

- Table 13 shows the sales tax paid on consumer spending
- Table 14 shows the sales tax paid on business investment
- Table 15 shows the sales tax paid on residential investment
- Table 16 shows the sales tax paid on government investment
- Table 17 shows the sales tax paid on government spending

**Table 13**

Sales Tax Paid on \$100 of Consumer Spending						
	Taxes paid by Business		Taxes paid on the Selling Price		Total Taxes Paid	
	GST	RST	GST	RST	GST	RST
Grains	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.12	1.66	1.61	1.66	1.74
Forestry products	0.00	0.72	1.28	0.00	1.28	0.72
Fish and seafood and hunting and trapping products	0.00	0.08	0.00	0.00	0.00	0.08
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	5.00	0.00	5.00	0.00
Non-metallic minerals	0.00	0.20	1.42	2.51	1.42	2.71
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.07	0.04	0.04	0.04	0.11
Fruit, vegetable and other food products and feeds	0.00	0.08	1.44	2.17	1.44	2.25
Soft drinks and alcoholic beverages	0.01	0.16	4.72	10.22	4.73	10.39
Tobacco and tobacco products	0.00	0.00	4.62	0.00	4.62	0.00
Leather, rubber, and plastic products	0.00	0.04	4.86	6.82	4.86	6.86
Textile products	0.00	0.01	4.93	7.90	4.93	7.92
Hosiery, clothing and accessories	0.00	0.04	4.82	6.44	4.82	6.47
Lumber and wood products	0.00	0.08	4.93	7.84	4.93	7.92
Furniture and fixtures	0.00	0.05	4.86	7.60	4.86	7.66
Wood pulp, paper and paper products	0.00	0.05	4.93	5.96	4.93	6.01
Printing and publishing	0.00	0.34	4.93	1.21	4.93	1.55
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.08	4.93	7.90	4.93	7.97
Machinery	0.00	0.02	4.88	7.76	4.88	7.78
Motor vehicles, other transportation equipment and parts	0.00	0.03	4.16	6.65	4.16	6.69
Electrical, electronic and communication products	0.00	0.01	4.86	7.60	4.86	7.61
Non-metallic mineral products	0.00	0.08	4.99	7.97	4.99	8.05
Petroleum and coal products	0.00	0.08	4.93	0.16	4.93	0.25
Chemicals, pharmaceuticals and chemical products	0.00	0.03	2.70	4.35	2.70	4.38
Miscellaneous manufactured products	0.00	0.03	4.44	6.87	4.44	6.90
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.04	0.63	2.46	0.36	2.50	0.99
Communications services	0.02	0.71	4.98	7.60	5.00	8.30
Other utilities	0.03	0.24	3.87	0.00	3.90	0.24
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.42	12.05	33.05	12.05	33.47
Gross imputed rent	0.47	0.34	0.00	0.00	0.47	0.34
Finance, insurance, and real estate services	0.41	0.29	0.35	1.83	0.75	2.12
Business and computer services	0.01	0.47	4.82	0.50	4.83	0.97
Education, tuition and other fees services	0.13	0.29	0.51	0.00	0.64	0.29
Health and social services	0.58	0.59	0.00	0.00	0.58	0.59
Accommodation services and meals	0.01	0.22	4.25	5.56	4.25	5.78
Other services	0.11	0.58	3.22	1.89	3.34	2.47
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.43	1.11	0.43	1.11
Services provided by non-profit institutions serving households	0.54	0.56	0.00	0.00	0.54	0.56
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.10	0.26	0.25	0.00	0.35	0.26
Total	0.15	0.21	2.48	3.58	2.63	3.79

**Table 14**

	Taxes paid by Business		Taxes paid on the Selling Price		Total Taxes Paid	
	GST	RST	GST	RST	GST	RST
Grains	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.04	0.09	6.98	0.09	7.02
Textile products	0.00	0.01	2.12	7.77	2.12	7.78
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.08	0.00	7.94	0.00	8.02
Furniture and fixtures	0.00	0.05	0.42	7.99	0.42	8.05
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.08	0.04	2.46	0.04	2.54
Machinery	0.00	0.02	0.28	3.99	0.28	4.00
Motor vehicles, other transportation equipment and parts	0.00	0.03	1.52	5.13	1.52	5.16
Electrical, electronic and communication products	0.00	0.01	0.22	5.27	0.22	5.28
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.03	0.94	7.08	0.94	7.11
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	0.00	3.19	0.44	0.00	0.44	3.19
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.41	0.29	0.43	4.63	0.84	4.92
Business and computer services	0.01	0.47	0.30	2.20	0.31	2.67
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.81	0.58	3.26	0.58	4.07

**Table 15**

<b>Sales Tax Paid on \$100 of Residential Investment</b>						
	<b>Taxes paid by Business</b>		<b>Taxes paid on the Selling Price</b>		<b>Total Taxes Paid</b>	
	<b>GST</b>	<b>RST</b>	<b>GST</b>	<b>RST</b>	<b>GST</b>	<b>RST</b>
Grains	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.00	0.00	0.00	0.00	0.00
Textile products	0.00	0.00	0.00	0.00	0.00	0.00
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	0.00	0.00	0.00	0.00	0.00	0.00
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.00	0.00	0.00	0.00	0.00
Machinery	0.00	0.00	0.00	0.00	0.00	0.00
Motor vehicles, other transportation equipment and parts	0.00	0.03	4.24	0.06	4.24	4.10
Electrical, electronic and communication products	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.00	0.00	0.00	0.00	0.00
Residential building construction	0.00	3.19	4.22	0.00	4.22	3.19
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.41	0.29	5.00	0.00	5.41	0.29
Business and computer services	0.01	0.47	5.00	0.00	5.01	0.47
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.06</b>	<b>2.63</b>	<b>4.24</b>	<b>0.00</b>	<b>4.29</b>	<b>2.63</b>

**Table 16**

<b>Sales Tax Paid on \$100 of Government Investment</b>						
	<b>Taxes paid by Business</b>		<b>Taxes paid on the Selling Price</b>		<b>Total Taxes Paid</b>	
	<b>GST</b>	<b>RST</b>	<b>GST</b>	<b>RST</b>	<b>GST</b>	<b>RST</b>
Grains	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.04	0.00	0.50	0.00	0.55
Textile products	0.00	0.01	1.28	7.47	1.28	7.48
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	0.00	0.05	0.56	3.91	0.56	3.97
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.08	0.75	5.53	0.75	5.60
Machinery	0.00	0.02	0.32	4.34	0.32	4.35
Motor vehicles, other transportation equipment and parts	0.00	0.03	0.14	4.36	0.14	4.40
Electrical, electronic and communication products	0.00	0.01	0.22	3.48	0.22	3.49
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.03	0.65	1.63	0.65	1.66
Residential building construction	0.00	3.19	0.23	0.00	0.23	3.19
Non-residential construction	0.00	3.19	0.57	0.00	0.57	3.19
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.00	0.00	0.00	0.00	0.00	0.00
Business and computer services	0.01	0.47	0.16	1.22	0.16	1.68
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>2.16</b>	<b>0.49</b>	<b>0.94</b>	<b>0.49</b>	<b>3.11</b>



**Table 17**

00000000=00000000000000						
	Taxes paid by Business		Taxes paid on the Selling Price		Total Taxes Paid	
	GST	RST	GST	RST	GST	RST
Grains	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.00	0.00	0.00	0.00	0.00
Textile products	0.00	0.00	0.00	0.00	0.00	0.00
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	0.00	0.00	0.00	0.00	0.00	0.00
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.00	0.00	0.00	0.00	0.00
Machinery	0.00	0.00	0.00	0.00	0.00	0.00
Motor vehicles, other transportation equipment and parts	0.00	0.00	0.00	0.00	0.00	0.00
Electrical, electronic and communication products	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.00	0.00	0.00	0.00	0.00
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.00	0.00	0.00	0.00	0.00	0.00
Business and computer services	0.00	0.00	0.00	0.00	0.00	0.00
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.10	0.26	0.00	0.00	0.10	0.26
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.10	0.26	0.00	0.00	0.10	0.26

## Appendix C: Methodology for Sales Tax Calculations

Statistics Canada's 2004 preliminary S-level input-output and tax margin tables for Ontario were used to derive the impact of GST and the RST on prices in Ontario. Taxable proportions for each commodity were generated which when combined with statutory tax rates allow us to determine the impact of a tax on the price of a particular commodity.

### Calculating the Impact of Sales Taxes on Business Costs

The RST tax proportion is derived for each industry as follows:

$$\text{RST taxable proportion of business costs} = \frac{((\text{Gross Output net of indirect taxes} + \text{net RST paid}) / (\text{Gross Output net of indirect taxes} - 1)) / \text{Statutory RST Rate}}{1}$$

The GST tax proportion is derived for each industry as follows:

$$\text{GST taxable proportion of business costs} = \frac{((\text{Gross Output net of indirect taxes} + \text{net GST paid}) / (\text{Gross Output net of indirect taxes} - 1)) / \text{Statutory GST Rate}}{1}$$

The industry-based information derived in the first step is then converted to the equivalent information for goods and services purchased by households and businesses. The taxable proportions by industry were multiplied by Ontario's 2004 preliminary S-level make matrix, normalized by commodity, to estimate taxable proportions by commodity for goods and services produced in Ontario.

This allows us to generate the base price for each commodity. The base price accounts for the impact of GST and RST paid by industry in their operating costs. This is generated as:

$$\text{Base Price} = \frac{\text{Selling Price}}{((1 + \text{Effective tax rate for other indirect taxes on products}) * (1 + \text{Statutory GST Rate} * \text{GST taxable proportion of business costs} * (1 - \text{International Import Propensity}) + \text{Statutory RST Rate} * \text{RST taxable proportion of business costs} * (1 - \text{Total Import Propensity})))}$$

The taxable proportions in this calculation are combined with import leakage vectors to estimate the domestic taxable proportions used in determining the impact on final demand prices. This adjustment is required in order to account for imported goods and services purchased in Ontario that were not subject to these sales taxes during production. The import leakage vector used to adjust the RST taxable proportion includes both international and inter-provincial imports while for the GST the import leakage vector includes just international imports because the GST is a national tax.

## Calculating the Impact of the GST and RST on Prices

The impact of sales taxes on prices in the Status Quo scenario is determined by calculating a set of taxable proportions for each commodity and tax.

The RST tax proportion by commodity is derived for each final demand category as follows:

$$\begin{aligned} \text{RST taxable proportion} = \\ ((\text{Spending at Purchaser Prices net of sales taxes} + \text{net RST paid}) / (\text{Spending at Purchaser Prices net of} \\ \text{sales Taxes}) - 1) / \text{Statutory RST Rate} \end{aligned}$$

The GST tax proportion by commodity is derived for each final demand category as follows:

$$\begin{aligned} \text{GST taxable proportion} = \\ ((\text{Spending at Purchaser Prices net of sales taxes} + \text{net GST paid}) / (\text{Spending at Purchaser Prices net of} \\ \text{sales taxes}) - 1) / \text{Statutory GST Rate} \end{aligned}$$

The purchase price of commodities with the GST and RST is generated as follows:

$$\begin{aligned} \text{Purchaser Price} = \\ \text{Selling Price} * (1 + \text{Statutory GST Rate} * \text{GST taxable proportion} + \text{Statutory RST Rate} * \text{RST taxable} \\ \text{proportion}) \end{aligned}$$

## Calculating the Impact of the HST on Prices

Taxable proportions for the HST are assumed to be the same as the taxable proportions for the GST in the Status Quo scenario with one exception: tobacco products are assumed to be zero-rated for the Ontario portion of the HST. The impact on prices before taxes from the HST on business costs is generated as follows:

$$\begin{aligned} \text{Selling Price} = & \\ & \text{Base Price} * (1 + \text{Effective tax rate for other indirect taxes on products}) * (1 + \text{Federal Portion of Statutory} \\ & \text{HST Rate} * \text{HST taxable proportion of business costs} * (1 - \text{International Import Leakage}) + \text{Ontario Portion} \\ & \text{of Statutory HST Rate} * \text{HST taxable proportion of business costs} * (1 - \text{Total Import Leakage})) \end{aligned}$$

The impact on purchaser prices from the HST is generated as follows:

$$\begin{aligned} \text{Purchaser Price} = & \\ & \text{Selling Price} * (1 + \text{Statutory HST Rate} * \text{HST Taxable Proportion}) \end{aligned}$$

## Calculating the Impact of the Made-In-Ontario Sales Tax on Prices

Taxable proportions for the Made-in-Ontario sales tax option are adjusted to incorporate a standard 13% rate (8% provincial and 5% federal) for all goods and services subject to the GST except for the following commodities and sectors which are zero-rated for the Ontario portion of the sales tax<sup>23</sup>:

- Children's clothing
- "Clean" electricity generation and/or fuel
- Labour intensive services (i.e. hairdressing, domestic care, small repairing, renovations, and cleaning services to households)
- Municipal government sector
- Academic sector
- Schools
- Hospitals

<sup>23</sup> More information on the commodities included in these exemptions is provided in Appendix A. The specific set of commodities and industries included in each of the reform options presented in this report is discussed in the Introduction.

The impact on prices before taxes from the OST on business costs is generated as follows:

Selling Price =

Base Price \* (1 + Effective tax rate for other indirect taxes on products) \* (1 + Statutory GST Rate \* GST taxable proportion of business costs \* (1 – International Import Leakage) + Statutory OST Rate \* OST taxable proportion of business costs \* (1 – Total Import Leakage))

The impact on purchaser prices from the OST is generated as follows:

Purchaser Price =

Selling Price \* (1 + Statutory GST Rate \* GST Taxable Proportion + Statutory OST Rate \* OST Taxable Proportion)

## Appendix D: Effective Tax Rates on Business Costs

This appendix includes tables showing effective tax rates by industry and commodity for current and proposed sales taxes in Ontario. Table 20 shows the import propensities used to determine the impact of business taxes on purchaser prices in Ontario.

**Table 18**

Effective Tax Rates by Industry in Ontario					
	Federal GST	Ontario RST	Ontario HST	Ontario OST-a	Ontario OST-b
Crop and Animal Production	0.0%	0.1%	0.0%	0.0%	0.0%
Forestry and Logging	0.0%	0.8%	0.0%	0.0%	0.0%
Fishing, Hunting and Trapping	0.0%	0.7%	0.0%	0.0%	0.0%
Support Activities for Agriculture and forestry	0.0%	0.5%	0.0%	0.0%	0.0%
Mining and Oil and Gas Extraction	0.0%	0.3%	0.0%	0.0%	0.0%
Utilities	0.0%	0.2%	0.0%	0.0%	0.0%
Construction	0.0%	3.2%	0.0%	0.0%	0.0%
Manufacturing	0.0%	0.1%	0.0%	0.0%	0.0%
Wholesale Trade	0.0%	0.6%	0.0%	0.0%	0.0%
Retail Trade	0.0%	0.4%	0.0%	0.0%	0.0%
Transportation and Warehousing	0.0%	0.9%	0.1%	0.1%	0.1%
Information and Cultural Industries	0.0%	0.8%	0.0%	0.0%	0.0%
Finance, Insurance, Real Estate and Rental and Leasing	0.5%	0.3%	0.8%	0.8%	0.3%
Professional, Scientific and Technical Services	0.0%	0.6%	0.0%	0.0%	0.0%
Administrative and Support, Waste Management and Remediation Services	0.0%	0.7%	0.0%	0.0%	0.0%
Educational Services	0.0%	0.3%	0.0%	0.0%	0.0%
Health Care and Social Assistance	0.7%	0.7%	1.1%	0.0%	1.1%
Arts, Entertainment and Recreation	0.2%	0.8%	0.3%	0.3%	0.3%
Accommodation and Food Services	0.0%	0.3%	0.0%	0.0%	0.0%
Other services (except health care and social assistance)	0.0%	0.8%	0.0%	0.0%	0.0%
Operating, Office, Cafeteria and Laboratory Supplies	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, Entertainment, Advertising and Promotion	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation Margins	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Profit Institutions Serving Households	0.5%	0.6%	0.9%	0.9%	0.9%
Government Sector	0.1%	0.3%	0.2%	0.0%	0.2%
Total	0.1%	0.5%	0.2%	0.1%	0.1%

**Table 19**

<b>Effective Tax Rates on Commodities Produced in Ontario</b>					
	<b>Federal GST</b>	<b>Ontario RST</b>	<b>Ontario HST</b>	<b>Ontario OST-a</b>	<b>Ontario OST-b</b>
Grains	0.0%	0.1%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	0.2%	0.0%	0.0%	0.0%
Forestry products	0.0%	0.8%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.7%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.6%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.3%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	0.3%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.3%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	0.1%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	0.1%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.0%	0.2%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	0.1%	0.0%	0.0%	0.0%
Textile products	0.0%	0.1%	0.0%	0.0%	0.0%
Hosiery, clothing and accessories	0.0%	0.1%	0.0%	0.0%	0.0%
Lumber and wood products	0.0%	0.2%	0.0%	0.0%	0.0%
Furniture and fixtures	0.0%	0.1%	0.0%	0.0%	0.0%
Wood pulp, paper and paper products	0.0%	0.1%	0.0%	0.0%	0.0%
Printing and publishing	0.0%	0.5%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.1%	0.0%	0.0%	0.0%
Fabricated metal products	0.0%	0.1%	0.0%	0.0%	0.0%
Machinery	0.0%	0.1%	0.0%	0.0%	0.0%
Motor vehicles, other transportation equipment and parts	0.0%	0.1%	0.0%	0.0%	0.0%
Electrical, electronic and communication products	0.0%	0.1%	0.0%	0.0%	0.0%
Non-metallic mineral products	0.0%	0.1%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	0.1%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	0.1%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.0%	0.2%	0.0%	0.0%	0.0%
Residential building construction	0.0%	3.2%	0.0%	0.0%	0.0%
Non-residential construction	0.0%	3.2%	0.0%	0.0%	0.0%
Repair construction	0.0%	3.2%	0.0%	0.0%	0.0%
Transportation and storage	0.0%	0.9%	0.1%	0.1%	0.1%
Communications services	0.0%	0.8%	0.0%	0.0%	0.0%
Other utilities	0.0%	0.2%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.6%	0.0%	0.0%	0.0%
Retailing margins and services	0.0%	0.4%	0.0%	0.0%	0.0%
Gross imputed rent	0.5%	0.3%	0.8%	0.8%	0.3%
Finance, insurance, and real estate services	0.5%	0.3%	0.7%	0.7%	0.3%
Business and computer services	0.0%	0.6%	0.0%	0.0%	0.0%
Education, tuition and other fees services	0.1%	0.3%	0.2%	0.1%	0.2%
Health and social services	0.6%	0.6%	1.0%	0.1%	1.0%
Accommodation services and meals	0.0%	0.3%	0.0%	0.0%	0.0%
Other services	0.1%	0.7%	0.2%	0.2%	0.1%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	0.5%	0.6%	0.9%	0.9%	0.9%
Government sector services	0.1%	0.3%	0.2%	0.0%	0.2%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	0.1%	0.3%	0.2%	0.0%	0.2%
Total	0.1%	0.5%	0.2%	0.1%	0.1%

**Table 20**

<b>Ontario Import Leakage Proportions by Commodity</b>		
	<b>Total</b>	<b>Inter-national</b>
Grains	44.0%	14.6%
Other agricultural products	31.7%	22.5%
Forestry products	9.2%	2.2%
Fish and seafood and hunting and trapping products	88.3%	55.5%
Metal ores and concentrates	100.0%	70.9%
Mineral fuels	99.3%	40.3%
Non-metallic minerals	34.5%	23.8%
Services incidental to mining	17.5%	9.8%
Meat, fish and dairy products	43.8%	14.1%
Fruit, vegetable and other food products and feeds	42.4%	26.0%
Soft drinks and alcoholic beverages	28.5%	17.0%
Tobacco and tobacco products	100.0%	33.9%
Leather, rubber, and plastic products	68.1%	56.6%
Textile products	89.4%	76.0%
Hosiery, clothing and accessories	72.4%	58.3%
Lumber and wood products	46.5%	15.1%
Furniture and fixtures	57.8%	49.8%
Wood pulp, paper and paper products	61.2%	41.1%
Printing and publishing	25.0%	16.6%
Primary metal products	53.4%	40.2%
Fabricated metal products	42.7%	32.1%
Machinery	88.9%	85.4%
Motor vehicles, other transportation equipment and parts	72.9%	70.3%
Electrical, electronic and communication products	92.8%	84.9%
Non-metallic mineral products	40.4%	31.9%
Petroleum and coal products	33.8%	10.7%
Chemicals, pharmaceuticals and chemical products	78.1%	69.1%
Miscellaneous manufactured products	83.5%	78.0%
Residential building construction	0.0%	0.0%
Non-residential construction	0.0%	0.0%
Repair construction	0.0%	0.0%
Transportation and storage	26.2%	13.8%
Communications services	16.4%	6.7%
Other utilities	4.8%	2.3%
Wholesaling margins	13.4%	0.8%
Retailing margins and services	1.9%	0.0%
Gross imputed rent	0.0%	0.0%
Finance, insurance, and real estate services	14.1%	10.1%
Business and computer services	19.1%	12.5%
Education, tuition and other fees services	10.6%	9.0%
Health and social services	2.2%	2.1%
Accommodation services and meals	32.2%	24.9%
Other services	11.3%	7.1%
Transportation margins	36.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%
Services provided by non-profit institutions serving households	0.0%	0.0%
Government sector services	0.0%	0.0%
Non-competing imports	100.0%	100.0%
Unallocated imports and exports	100.0%	100.0%
Sales of other government services	0.9%	0.9%
Total	27.9%	20.7%



## **Appendix E:** **Taxable Proportions by Commodity**

This appendix provides tables showing taxable proportions by commodity for current and proposed sales taxes in Ontario. The tables show the taxable proportions on prices before taxes and the total taxable proportions that include sales taxes paid by business that are included in the purchase price. The tables are arranged by current and proposed tax as follows:

- Table 21 shows the RST taxable proportions
- Table 22 shows the GST taxable proportions
- Table 23 shows the HST taxable proportions
- Table 24 shows the OST-a taxable proportions
- Table 25 shows the OST-b taxable proportions

**Table 21**

	Taxable Proportions - RST									
	Total - Including Business Costs					Taxable Proportion on Selling Prices				
	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	21.7%	0.0%	0.0%	0.0%	0.0%	20.2%	0.0%	0.0%	0.0%	0.0%
Forestry products	9.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	33.9%	0.0%	0.0%	0.0%	0.0%	31.4%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	1.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	28.2%	0.0%	0.0%	0.0%	0.0%	27.2%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	129.8%	0.0%	0.0%	0.0%	0.0%	127.8%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	85.8%	87.7%	0.0%	6.8%	0.0%	85.2%	87.2%	0.0%	6.3%	0.0%
Textile products	99.0%	97.3%	0.0%	93.5%	0.0%	98.8%	97.1%	0.0%	93.3%	0.0%
Hosiery, clothing and accessories	80.9%	0.0%	0.0%	0.0%	0.0%	80.5%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	99.0%	100.2%	0.0%	0.0%	0.0%	98.0%	99.2%	0.0%	0.0%	0.0%
Furniture and fixtures	95.7%	100.6%	0.0%	49.6%	0.0%	95.1%	99.9%	0.0%	48.9%	0.0%
Wood pulp, paper and paper products	75.2%	0.0%	0.0%	0.0%	0.0%	74.5%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	19.3%	0.0%	0.0%	0.0%	0.0%	15.1%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	99.7%	31.7%	0.0%	70.0%	0.0%	98.7%	30.8%	0.0%	69.1%	0.0%
Machinery	97.2%	50.0%	0.0%	54.4%	0.0%	97.0%	49.8%	0.0%	54.2%	0.0%
Motor vehicles, other transportation equipment and parts	83.6%	64.5%	51.2%	55.0%	0.0%	83.1%	64.1%	50.8%	54.5%	0.0%
Electrical, electronic and communication products	95.2%	66.0%	0.0%	43.7%	0.0%	95.0%	65.9%	0.0%	43.5%	0.0%
Non-metallic mineral products	100.6%	0.0%	0.0%	0.0%	0.0%	99.7%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	3.1%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	54.7%	0.0%	0.0%	0.0%	0.0%	54.4%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	86.3%	88.9%	0.0%	20.8%	0.0%	85.9%	88.5%	0.0%	20.4%	0.0%
Residential building construction	0.0%	0.0%	39.9%	39.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-residential construction	0.0%	39.9%	0.0%	39.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	12.4%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%
Communications services	103.8%	0.0%	0.0%	0.0%	0.0%	95.0%	0.0%	0.0%	0.0%	0.0%
Other utilities	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	418.4%	0.0%	0.0%	0.0%	0.0%	413.1%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	26.5%	61.5%	3.6%	0.0%	0.0%	22.9%	57.9%	0.0%	0.0%	0.0%
Business and computer services	12.1%	33.4%	5.8%	21.1%	0.0%	6.3%	27.6%	0.0%	15.2%	0.0%
Education, tuition and other fees services	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	72.3%	0.0%	0.0%	0.0%	0.0%	69.5%	0.0%	0.0%	0.0%	0.0%
Other services	30.8%	0.0%	0.0%	0.0%	0.0%	23.6%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	13.9%	0.0%	0.0%	0.0%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	47.4%	50.9%	32.8%	38.8%	3.2%	44.8%	40.7%	0.0%	11.8%	0.0%

**Table 22**

	Taxable Proportions - GST									
	Total - Including Business Costs					Taxable Proportion on Selling Prices				
	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
Forestry products	25.7%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	28.4%	0.0%	0.0%	0.0%	0.0%	28.4%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	28.8%	0.0%	0.0%	0.0%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	94.6%	0.0%	0.0%	0.0%	0.0%	94.4%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	92.5%	0.0%	0.0%	0.0%	0.0%	92.5%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	97.1%	1.8%	0.0%	0.0%	0.0%	97.1%	1.8%	0.0%	0.0%	0.0%
Textile products	98.6%	42.4%	0.0%	25.6%	0.0%	98.6%	42.4%	0.0%	25.6%	0.0%
Hosiery, clothing and accessories	96.4%	0.0%	0.0%	0.0%	0.0%	96.4%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	97.3%	8.4%	0.0%	11.2%	0.0%	97.3%	8.4%	0.0%	11.2%	0.0%
Wood pulp, paper and paper products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	98.6%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	98.6%	0.8%	0.0%	14.9%	0.0%	98.6%	0.8%	0.0%	14.9%	0.0%
Machinery	97.6%	5.7%	0.0%	6.5%	0.0%	97.6%	5.7%	0.0%	6.5%	0.0%
Motor vehicles, other transportation equipment and parts	83.2%	30.5%	84.8%	2.9%	0.0%	83.2%	30.5%	84.8%	2.9%	0.0%
Electrical, electronic and communication products	97.1%	4.4%	0.0%	4.4%	0.0%	97.1%	4.4%	0.0%	4.4%	0.0%
Non-metallic mineral products	99.8%	0.0%	0.0%	0.0%	0.0%	99.8%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	98.5%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	54.0%	0.0%	0.0%	0.0%	0.0%	54.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	88.9%	18.7%	0.0%	12.9%	0.0%	88.8%	18.7%	0.0%	12.9%	0.0%
Residential building construction	0.0%	0.0%	84.4%	4.5%	0.0%	0.0%	0.0%	84.4%	4.5%	0.0%
Non-residential construction	0.0%	8.9%	0.0%	11.5%	0.0%	0.0%	8.9%	0.0%	11.5%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	50.0%	0.0%	0.0%	0.0%	0.0%	49.2%	0.0%	0.0%	0.0%	0.0%
Communications services	100.0%	0.0%	0.0%	0.0%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%
Other utilities	78.0%	0.0%	0.0%	0.0%	0.0%	77.4%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	241.1%	0.0%	0.0%	0.0%	0.0%	241.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	15.1%	16.8%	108.2%	0.0%	0.0%	6.9%	8.6%	100.0%	0.0%	0.0%
Business and computer services	96.5%	6.2%	100.1%	3.3%	0.0%	96.4%	6.1%	100.0%	3.1%	0.0%
Education, tuition and other fees services	12.8%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%
Health and social services	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	85.1%	0.0%	0.0%	0.0%	0.0%	84.9%	0.0%	0.0%	0.0%	0.0%
Other services	66.7%	0.0%	0.0%	0.0%	0.0%	64.5%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	8.6%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	7.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%
Total	52.6%	11.5%	85.9%	9.8%	2.0%	49.5%	11.5%	84.7%	9.8%	0.0%

**Table 23**

	Taxable Proportions - HST									
	Total - Including Business Costs					Taxable Proportion on Selling Prices				
	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
Forestry products	25.7%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	28.4%	0.0%	0.0%	0.0%	0.0%	28.4%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	28.8%	0.0%	0.0%	0.0%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	94.5%	0.0%	0.0%	0.0%	0.0%	94.4%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	97.1%	1.8%	0.0%	0.0%	0.0%	97.1%	1.8%	0.0%	0.0%	0.0%
Textile products	98.6%	42.4%	0.0%	25.6%	0.0%	98.6%	42.4%	0.0%	25.6%	0.0%
Hosiery, clothing and accessories	96.4%	0.0%	0.0%	0.0%	0.0%	96.4%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	97.3%	8.4%	0.0%	11.2%	0.0%	97.3%	8.4%	0.0%	11.2%	0.0%
Wood pulp, paper and paper products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	98.6%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	98.6%	0.8%	0.0%	14.9%	0.0%	98.6%	0.8%	0.0%	14.9%	0.0%
Machinery	97.6%	5.7%	0.0%	6.5%	0.0%	97.6%	5.7%	0.0%	6.5%	0.0%
Motor vehicles, other transportation equipment and parts	83.2%	30.5%	84.8%	2.9%	0.0%	83.2%	30.5%	84.8%	2.9%	0.0%
Electrical, electronic and communication products	97.1%	4.4%	0.0%	4.4%	0.0%	97.1%	4.4%	0.0%	4.4%	0.0%
Non-metallic mineral products	99.8%	0.0%	0.0%	0.0%	0.0%	99.8%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	98.5%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	54.0%	0.0%	0.0%	0.0%	0.0%	54.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	88.8%	18.7%	0.0%	12.9%	0.0%	88.8%	18.7%	0.0%	12.9%	0.0%
Residential building construction	0.0%	0.0%	84.4%	4.5%	0.0%	0.0%	0.0%	84.4%	4.5%	0.0%
Non-residential construction	0.0%	8.9%	0.0%	11.5%	0.0%	0.0%	8.9%	0.0%	11.5%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	49.9%	0.0%	0.0%	0.0%	0.0%	49.2%	0.0%	0.0%	0.0%	0.0%
Communications services	99.9%	0.0%	0.0%	0.0%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%
Other utilities	78.0%	0.0%	0.0%	0.0%	0.0%	77.4%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	241.1%	0.0%	0.0%	0.0%	0.0%	241.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	14.7%	16.4%	107.8%	0.0%	0.0%	6.9%	8.6%	100.0%	0.0%	0.0%
Business and computer services	96.5%	6.2%	100.1%	3.3%	0.0%	96.4%	6.1%	100.0%	3.1%	0.0%
Education, tuition and other fees services	12.7%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%
Health and social services	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	85.1%	0.0%	0.0%	0.0%	0.0%	84.9%	0.0%	0.0%	0.0%	0.0%
Other services	66.6%	0.0%	0.0%	0.0%	0.0%	64.5%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	8.6%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	7.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%
Total	48.1%	11.5%	85.8%	9.8%	0.0%	47.9%	11.5%	84.7%	9.8%	0.0%

Table 24

	Taxable Proportions - OST-a									
	Total - Including Business Costs					Taxable Proportion on Selling Prices				
	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
Forestry products	25.7%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	28.4%	0.0%	0.0%	0.0%	0.0%	28.4%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	28.8%	0.0%	0.0%	0.0%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	94.5%	0.0%	0.0%	0.0%	0.0%	94.4%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	97.1%	1.8%	0.0%	0.0%	0.0%	97.1%	1.8%	0.0%	0.0%	0.0%
Textile products	98.6%	42.4%	0.0%	25.6%	0.0%	98.6%	42.4%	0.0%	25.6%	0.0%
Hosiery, clothing and accessories	79.5%	0.0%	0.0%	0.0%	0.0%	79.5%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	97.3%	8.4%	0.0%	11.2%	0.0%	97.3%	8.4%	0.0%	11.2%	0.0%
Wood pulp, paper and paper products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	98.6%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	98.6%	0.8%	0.0%	14.9%	0.0%	98.6%	0.8%	0.0%	14.9%	0.0%
Machinery	97.6%	5.7%	0.0%	6.5%	0.0%	97.6%	5.7%	0.0%	6.5%	0.0%
Motor vehicles, other transportation equipment and parts	83.2%	30.5%	84.8%	2.9%	0.0%	83.2%	30.5%	84.8%	2.9%	0.0%
Electrical, electronic and communication products	97.1%	4.4%	0.0%	4.4%	0.0%	97.1%	4.4%	0.0%	4.4%	0.0%
Non-metallic mineral products	99.8%	0.0%	0.0%	0.0%	0.0%	99.8%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	98.5%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	54.0%	0.0%	0.0%	0.0%	0.0%	54.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	88.8%	18.7%	0.0%	12.9%	0.0%	88.8%	18.7%	0.0%	12.9%	0.0%
Residential building construction	0.0%	0.0%	84.4%	4.5%	0.0%	0.0%	0.0%	84.4%	4.5%	0.0%
Non-residential construction	0.0%	8.9%	0.0%	11.5%	0.0%	0.0%	8.9%	0.0%	11.5%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	49.8%	0.0%	0.0%	0.0%	0.0%	49.2%	0.0%	0.0%	0.0%	0.0%
Communications services	99.9%	0.0%	0.0%	0.0%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%
Other utilities	70.9%	0.0%	0.0%	0.0%	0.0%	70.6%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	241.1%	0.0%	0.0%	0.0%	0.0%	241.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	14.7%	16.4%	107.8%	0.0%	0.0%	6.9%	8.6%	100.0%	0.0%	0.0%
Business and computer services	96.5%	6.2%	100.1%	3.2%	0.0%	96.4%	6.1%	100.0%	3.1%	0.0%
Education, tuition and other fees services	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	85.0%	0.0%	0.0%	0.0%	0.0%	84.9%	0.0%	0.0%	0.0%	0.0%
Other services	46.9%	0.0%	0.0%	0.0%	0.0%	44.8%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	8.6%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	3.7%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%
Total	49.4%	11.4%	85.2%	9.8%	2.0%	45.6%	11.5%	84.7%	9.8%	0.0%

Table 25

	Taxable Proportions - OST-b									
	Total - Including Business Costs					Taxable Proportion on Selling Prices				
	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending	Personal Spending	Business Investment	Residential Investment	Government Investment	Government Spending
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
Forestry products	25.7%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	28.4%	0.0%	0.0%	0.0%	0.0%	28.4%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	28.8%	0.0%	0.0%	0.0%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	94.5%	0.0%	0.0%	0.0%	0.0%	94.4%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	97.1%	1.8%	0.0%	0.0%	0.0%	97.1%	1.8%	0.0%	0.0%	0.0%
Textile products	98.6%	42.4%	0.0%	25.6%	0.0%	98.6%	42.4%	0.0%	25.6%	0.0%
Hosiery, clothing and accessories	96.4%	0.0%	0.0%	0.0%	0.0%	96.4%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	97.3%	8.4%	0.0%	11.2%	0.0%	97.3%	8.4%	0.0%	11.2%	0.0%
Wood pulp, paper and paper products	98.6%	0.0%	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	98.6%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	98.6%	0.8%	0.0%	14.9%	0.0%	98.6%	0.8%	0.0%	14.9%	0.0%
Machinery	97.6%	5.7%	0.0%	6.5%	0.0%	97.6%	5.7%	0.0%	6.5%	0.0%
Motor vehicles, other transportation equipment and parts	83.2%	30.5%	84.8%	2.9%	0.0%	83.2%	30.5%	84.8%	2.9%	0.0%
Electrical, electronic and communication products	97.1%	4.4%	0.0%	4.4%	0.0%	97.1%	4.4%	0.0%	4.4%	0.0%
Non-metallic mineral products	99.8%	0.0%	0.0%	0.0%	0.0%	99.8%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	98.5%	0.0%	0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	54.0%	0.0%	0.0%	0.0%	0.0%	54.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	88.8%	18.7%	0.0%	12.9%	0.0%	88.8%	18.7%	0.0%	12.9%	0.0%
Residential building construction	0.0%	0.0%	84.4%	4.5%	0.0%	0.0%	0.0%	84.4%	4.5%	0.0%
Non-residential construction	0.0%	8.9%	0.0%	11.5%	0.0%	0.0%	8.9%	0.0%	11.5%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	49.9%	0.0%	0.0%	0.0%	0.0%	49.2%	0.0%	0.0%	0.0%	0.0%
Communications services	99.9%	0.0%	0.0%	0.0%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%
Other utilities	78.0%	0.0%	0.0%	0.0%	0.0%	77.4%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	241.0%	0.0%	0.0%	0.0%	0.0%	241.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	10.4%	12.1%	103.5%	0.0%	0.0%	6.9%	8.6%	100.0%	0.0%	0.0%
Business and computer services	96.5%	6.2%	100.1%	3.2%	0.0%	96.4%	6.1%	100.0%	3.1%	0.0%
Education, tuition and other fees services	12.7%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%
Health and social services	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	85.1%	0.0%	0.0%	0.0%	0.0%	84.9%	0.0%	0.0%	0.0%	0.0%
Other services	65.9%	0.0%	0.0%	0.0%	0.0%	64.5%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	8.6%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	7.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%
Total	49.4%	11.4%	85.2%	9.8%	2.0%	47.9%	11.5%	84.7%	9.8%	0.0%

## Appendix F: Prices by Commodity

This appendix provides tables showing prices by commodity excluding all taxes (the base price), with taxes paid by business included (purchase price before taxes) and with taxes paid at the time of purchase (purchase price after taxes). The tables are arranged by sector of economic activity as follows:

- Table 26 shows the prices by commodity for consumer spending
- Table 27 shows the prices by commodity for business investment
- Table 28 shows the prices by commodity for residential investment
- Table 29 shows the prices by commodity for government investment
- Table 30 shows the prices by commodity for government spending

Table 26

Consumer Spending Prices by Commodity and Scenario									
	Basic Prices	Selling Price				Purchase Price			
		Status Quo	HST	OST-a	OST-b	Status Quo	HST	OST-a	OST-b
Grains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	1.72	1.75	1.74	1.74	1.74	1.80	1.82	1.82	1.82
Forestry products	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11
Fish and seafood and hunting and trapping products	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	1.27	1.27	1.27	1.27	1.27	1.34	1.44	1.44	1.44
Non-metallic minerals	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	3.75	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77
Fruit, vegetable and other food products and feeds	4.43	4.45	4.45	4.45	4.45	4.61	4.62	4.62	4.62
Soft drinks and alcoholic beverages	2.12	2.64	2.64	2.64	2.64	3.03	2.96	2.96	2.90
Tobacco and tobacco products	0.41	0.89	0.89	0.89	0.89	0.93	0.93	0.93	0.91
Leather, rubber, and plastic products	1.07	1.07	1.07	1.07	1.07	1.19	1.20	1.20	1.20
Textile products	0.62	0.62	0.62	0.62	0.62	0.70	0.70	0.70	0.70
Hosiery, clothing and accessories	3.17	3.18	3.18	3.18	3.18	3.54	3.58	3.53	3.58
Lumber and wood products	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
Furniture and fixtures	1.08	1.08	1.08	1.08	1.08	1.22	1.22	1.22	1.22
Wood pulp, paper and paper products	0.72	0.72	0.72	0.72	0.72	0.80	0.82	0.82	0.82
Printing and publishing	0.75	0.75	0.75	0.75	0.75	0.80	0.85	0.85	0.85
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.35	0.35	0.35	0.35	0.35	0.40	0.40	0.40	0.40
Machinery	0.43	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48
Motor vehicles, other transportation equipment and parts	5.36	5.38	5.38	5.38	5.38	5.96	5.96	5.96	5.96
Electrical, electronic and communication products	2.38	2.38	2.38	2.38	2.38	2.67	2.68	2.68	2.68
Non-metallic mineral products	0.29	0.29	0.29	0.29	0.29	0.33	0.33	0.33	0.33
Petroleum and coal products	2.04	2.78	2.78	2.78	2.78	2.92	3.13	3.13	3.04
Chemicals, pharmaceuticals and chemical products	3.56	3.57	3.57	3.57	3.57	3.82	3.82	3.82	3.82
Miscellaneous manufactured products	3.16	3.17	3.17	3.17	3.17	3.53	3.54	3.54	3.53
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	2.33	2.45	2.44	2.44	2.44	2.52	2.59	2.59	2.59
Communications services	2.49	2.56	2.54	2.54	2.54	2.88	2.87	2.87	2.87
Other utilities	2.38	2.43	2.42	2.42	2.42	2.52	2.67	2.66	2.67
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.62	0.65	0.64	0.64	0.64	0.94	0.84	0.84	0.84
Gross imputed rent	14.10	15.48	15.54	15.54	15.48	15.48	15.54	15.54	15.48
Finance, insurance, and real estate services	13.27	14.35	14.40	14.40	14.35	14.66	14.53	14.53	14.48
Business and computer services	0.86	0.87	0.87	0.87	0.87	0.91	0.97	0.97	0.97
Education, tuition and other fees services	1.60	1.63	1.63	1.63	1.63	1.64	1.65	1.64	1.65
Health and social services	3.64	3.73	3.74	3.71	3.74	3.73	3.74	3.71	3.74
Accommodation services and meals	5.44	5.56	5.55	5.55	5.55	6.10	6.16	6.16	6.16
Other services	5.72	6.69	6.66	6.66	6.66	7.03	7.22	7.12	7.17
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Services provided by non-profit institutions serving households	2.33	2.38	2.39	2.39	2.39	2.38	2.39	2.39	2.39
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Total	94.15	100.00	100.02	99.99	99.90	105.33	106.10	105.89	105.76



**Table 27**

<b>Business Investment Prices by Commodity and Scenario</b>									
	<b>Basic Prices</b>	<b>Selling Price</b>				<b>Purchase Price</b>			
		<b>Status Quo</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>Status Quo</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
Grains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Textile products	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Furniture and fixtures	3.30	3.31	3.31	3.31	3.31	3.59	3.34	3.34	3.34
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	3.23	3.25	3.25	3.25	3.25	3.33	3.25	3.25	3.25
Machinery	23.05	23.07	23.06	23.06	23.06	24.05	23.23	23.23	23.23
Motor vehicles, other transportation equipment and parts	17.83	17.91	17.90	17.90	17.90	19.10	18.61	18.61	18.61
Electrical, electronic and communication products	7.25	7.26	7.25	7.25	7.25	7.65	7.30	7.30	7.30
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	2.40	2.40	2.40	2.40	2.40	2.60	2.46	2.46	2.46
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	29.42	31.26	30.30	30.30	30.30	31.40	30.65	30.65	30.65
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	1.91	2.06	2.07	2.07	2.06	2.16	2.10	2.10	2.09
Business and computer services	8.31	8.43	8.39	8.39	8.39	8.64	8.46	8.46	8.46
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>97.76</b>	<b>100.00</b>	<b>98.99</b>	<b>98.99</b>	<b>98.98</b>	<b>103.57</b>	<b>100.45</b>	<b>100.45</b>	<b>100.44</b>

**Table 28**

Residential Investment Prices by Commodity and Scenario									
	Basic Prices	Selling Price				Purchase Price			
		Status Quo	HST	OST-a	OST-b	Status Quo	HST	OST-a	OST-b
Grains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Textile products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor vehicles, other transportation equipment and parts	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Electrical, electronic and communication products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential building construction	76.28	81.06	78.55	78.55	78.55	84.38	87.17	87.17	87.17
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	12.89	13.94	13.99	13.99	13.94	14.64	15.79	15.79	15.74
Business and computer services	2.33	2.36	2.35	2.35	2.35	2.48	2.65	2.65	2.65
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	94.14	100.00	97.53	97.53	97.48	104.13	108.25	108.25	108.20

**Table 29**

Government Investment Prices by Commodity and Scenario									
	Basic Prices	Selling Price				Purchase Price			
		Status Quo	HST	OST-a	OST-b	Status Quo	HST	OST-a	OST-b
Grains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Textile products	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	2.11	2.12	2.11	2.11	2.11	2.21	2.15	2.15	2.15
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.45	0.46	0.46	0.46	0.46	0.48	0.46	0.46	0.46
Machinery	9.68	9.69	9.69	9.69	9.69	10.14	9.77	9.77	9.77
Motor vehicles, other transportation equipment and parts	2.62	2.63	2.63	2.63	2.63	2.75	2.64	2.64	2.64
Electrical, electronic and communication products	2.09	2.09	2.09	2.09	2.09	2.17	2.10	2.10	2.10
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	6.41	6.42	6.42	6.42	6.42	6.56	6.52	6.52	6.52
Residential building construction	1.31	1.39	1.35	1.35	1.35	1.39	1.36	1.36	1.36
Non-residential construction	61.56	65.42	63.39	63.39	63.39	65.78	64.34	64.34	64.34
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Business and computer services	9.62	9.76	9.71	9.71	9.71	9.89	9.75	9.75	9.75
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	95.88	100.00	97.88	97.88	97.88	101.42	99.13	99.13	99.13

**Table 30**

Government Investment Spending by Commodity and Scenario									
	Basic Prices	Selling Price				Purchase Price			
		Status Quo	HST	OST-a	OST-b	Status Quo	HST	OST-a	OST-b
Grains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other agricultural products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forestry products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish and seafood and hunting and trapping products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal ores and concentrates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services incidental to mining	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meat, fish and dairy products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruit, vegetable and other food products and feeds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soft drinks and alcoholic beverages	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco and tobacco products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leather, rubber, and plastic products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Textile products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hosiery, clothing and accessories	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lumber and wood products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Furniture and fixtures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood pulp, paper and paper products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Printing and publishing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primary metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fabricated metal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor vehicles, other transportation equipment and parts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electrical, electronic and communication products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic mineral products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum and coal products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals, pharmaceuticals and chemical products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous manufactured products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential building construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-residential construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repair construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation and storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Communications services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other utilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wholesaling margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retailing margins and services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross imputed rent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finance, insurance, and real estate services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Business and computer services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education, tuition and other fees services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health and social services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation services and meals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation margins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating, office, cafeteria and laboratory supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Travel, entertainment, advertising and promotion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services provided by non-profit institutions serving households	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government sector services	98.44	100.00	99.90	99.74	99.90	100.00	99.90	99.74	99.90
Non-competing imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unallocated imports and exports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales of other government services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	98.44	100.00	99.90	99.74	99.90	100.00	99.90	99.74	99.90

## **Appendix G:** **Percent Impact on Prices by Commodity**

This appendix provides tables showing the impact on prices by commodity relative to the Status Quo. The tables show the impact on purchase prices both before and after taxes. The tables are arranged by sector of economic activity as follows:

- Table 31 shows the impact on prices by commodity for consumer spending
- Table 32 shows the impact on prices by commodity for business investment
- Table 33 shows the impact on prices by commodity for residential investment
- Table 34 shows the impact on prices by commodity for government investment
- Table 35 shows the impact on prices by commodity for government spending

**Table 31**

<b>Percent Difference from Status Quo Prices for Consumer Spending by Commodity and Scenario</b>						
	<b>Selling Price</b>			<b>Purchase Price</b>		
	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	-0.1%	-0.1%	-0.1%	0.8%	0.8%	0.8%
Forestry products	-0.7%	-0.7%	-0.7%	1.3%	1.3%	1.3%
Fish and seafood and hunting and trapping products	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	7.6%	7.6%	7.6%
Non-metallic minerals	-0.2%	-0.2%	-0.2%	-0.4%	-0.4%	-0.4%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	-0.2%	-0.2%	-0.2%	-2.4%	-2.4%	-4.3%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.1%	0.1%	-2.3%
Leather, rubber, and plastic products	0.0%	0.0%	0.0%	0.8%	0.8%	0.8%
Textile products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hosiery, clothing and accessories	0.0%	0.0%	0.0%	1.1%	-0.1%	1.1%
Lumber and wood products	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
Furniture and fixtures	-0.1%	-0.1%	-0.1%	0.1%	0.1%	0.1%
Wood pulp, paper and paper products	-0.1%	-0.1%	-0.1%	1.7%	1.7%	1.7%
Printing and publishing	-0.3%	-0.3%	-0.3%	6.0%	6.0%	6.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Machinery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Motor vehicles, other transportation equipment and parts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Electrical, electronic and communication products	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Non-metallic mineral products	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Petroleum and coal products	-0.1%	-0.1%	-0.1%	7.3%	7.3%	4.2%
Chemicals, pharmaceuticals and chemical products	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%
Miscellaneous manufactured products	0.0%	0.0%	0.0%	0.2%	0.2%	0.2%
Residential building construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-residential construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	-0.6%	-0.6%	-0.6%	2.9%	2.9%	2.9%
Communications services	-0.7%	-0.7%	-0.7%	-0.3%	-0.3%	-0.3%
Other utilities	-0.2%	-0.2%	-0.2%	5.9%	5.3%	5.9%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	-0.4%	-0.4%	-0.4%	-9.7%	-9.7%	-9.7%
Gross imputed rent	0.4%	0.4%	0.0%	0.4%	0.4%	0.0%
Finance, insurance, and real estate services	0.3%	0.3%	0.0%	-0.9%	-0.9%	-1.2%
Business and computer services	-0.5%	-0.5%	-0.5%	6.4%	6.4%	6.4%
Education, tuition and other fees services	-0.1%	-0.2%	-0.1%	0.7%	-0.2%	0.7%
Health and social services	0.3%	-0.5%	0.3%	0.3%	-0.5%	0.3%
Accommodation services and meals	-0.2%	-0.2%	-0.2%	0.9%	0.9%	0.9%
Other services	-0.4%	-0.4%	-0.5%	2.7%	1.2%	2.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	-0.4%	-0.4%	-0.4%
Services provided by non-profit institutions serving households	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Government sector services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	-0.1%	-0.3%	-0.1%	0.3%	0.0%	0.3%
Total	0.0%	0.0%	-0.1%	0.7%	0.5%	0.4%

**Table 32**

<b>Percent Difference from Status Quo Prices for Business Investment by Commodity and Scenario</b>						
	<b>Selling Price</b>			<b>Purchase Price</b>		
	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forestry products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	0.0%	0.0%	-6.4%	-6.4%	-6.4%
Textile products	0.0%	0.0%	0.0%	-4.0%	-4.0%	-4.0%
Hosiery, clothing and accessories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	-0.1%	-0.1%	-0.1%	-7.4%	-7.4%	-7.4%
Furniture and fixtures	-0.1%	-0.1%	-0.1%	-6.8%	-6.8%	-6.8%
Wood pulp, paper and paper products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	-0.1%	-0.1%	-0.1%	-2.4%	-2.4%	-2.4%
Machinery	0.0%	0.0%	0.0%	-3.4%	-3.4%	-3.4%
Motor vehicles, other transportation equipment and parts	0.0%	0.0%	0.0%	-2.6%	-2.6%	-2.6%
Electrical, electronic and communication products	0.0%	0.0%	0.0%	-4.7%	-4.7%	-4.7%
Non-metallic mineral products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.0%	0.0%	0.0%	-5.2%	-5.2%	-5.2%
Residential building construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-residential construction	-3.1%	-3.1%	-3.1%	-2.4%	-2.4%	-2.4%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Communications services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	0.3%	0.3%	0.0%	-2.9%	-2.9%	-3.2%
Business and computer services	-0.5%	-0.5%	-0.5%	-2.1%	-2.1%	-2.1%
Education, tuition and other fees services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-1.0%	-1.0%	-1.0%	-3.0%	-3.0%	-3.0%

**Table 33**

<b>Percent Difference from Status Quo Prices for Residential Investment by Commodity and Scenario</b>						
	<b>Selling Price</b>			<b>Purchase Price</b>		
	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forestry products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Textile products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hosiery, clothing and accessories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood pulp, paper and paper products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Machinery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Motor vehicles, other transportation equipment and parts	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%
Electrical, electronic and communication products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic mineral products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residential building construction	-3.1%	-3.1%	-3.1%	3.3%	3.3%	3.3%
Non-residential construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Communications services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	0.3%	0.3%	0.0%	7.9%	7.9%	7.5%
Business and computer services	-0.5%	-0.5%	-0.5%	7.2%	7.2%	7.2%
Education, tuition and other fees services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-2.5%	-2.5%	-2.5%	4.0%	4.0%	3.9%



**Table 34**

<b>Percent Difference from Status Quo Prices for Government Investment by Commodity and Scenario</b>						
	<b>Selling Price</b>			<b>Purchase Price</b>		
	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forestry products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	0.0%	0.0%	-0.5%	-0.5%	-0.5%
Textile products	0.0%	0.0%	0.0%	-5.0%	-5.0%	-5.0%
Hosiery, clothing and accessories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	-0.1%	-0.1%	-0.1%	-2.9%	-2.9%	-2.9%
Wood pulp, paper and paper products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	-0.1%	-0.1%	-0.1%	-4.1%	-4.1%	-4.1%
Machinery	0.0%	0.0%	0.0%	-3.7%	-3.7%	-3.7%
Motor vehicles, other transportation equipment and parts	0.0%	0.0%	0.0%	-4.0%	-4.0%	-4.0%
Electrical, electronic and communication products	0.0%	0.0%	0.0%	-3.0%	-3.0%	-3.0%
Non-metallic mineral products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.0%	0.0%	0.0%	-0.6%	-0.6%	-0.6%
Residential building construction	-3.1%	-3.1%	-3.1%	-2.7%	-2.7%	-2.7%
Non-residential construction	-3.1%	-3.1%	-3.1%	-2.2%	-2.2%	-2.2%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Communications services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Business and computer services	-0.5%	-0.5%	-0.5%	-1.4%	-1.4%	-1.4%
Education, tuition and other fees services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-2.1%	-2.1%	-2.1%	-2.3%	-2.3%	-2.3%

**Table 35**

Percent Difference from Status Quo Prices for Government Spending by Commodity and Scenario						
	Selling Price			Purchase Price		
	HST	OST-a	OST-b	HST	OST-a	OST-b
Grains	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other agricultural products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forestry products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fish and seafood and hunting and trapping products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal ores and concentrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral fuels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic minerals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services incidental to mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meat, fish and dairy products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fruit, vegetable and other food products and feeds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Soft drinks and alcoholic beverages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tobacco and tobacco products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Leather, rubber, and plastic products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Textile products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hosiery, clothing and accessories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lumber and wood products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Furniture and fixtures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood pulp, paper and paper products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Printing and publishing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fabricated metal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Machinery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Motor vehicles, other transportation equipment and parts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Electrical, electronic and communication products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-metallic mineral products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Petroleum and coal products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chemicals, pharmaceuticals and chemical products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous manufactured products	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residential building construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-residential construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Repair construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation and storage	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Communications services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wholesaling margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retailing margins and services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross imputed rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance, insurance, and real estate services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Business and computer services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Education, tuition and other fees services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health and social services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation services and meals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transportation margins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating, office, cafeteria and laboratory supplies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Travel, entertainment, advertising and promotion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Services provided by non-profit institutions serving households	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government sector services	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.1%
Non-competing imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unallocated imports and exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sales of other government services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.1%

## Appendix H: C<sub>4</sub>SE Provincial Modeling System

The C<sub>4</sub>SE's Provincial Modeling System is a dynamic multi-sector regional economic model of the country. This model includes a set of bottom up macroeconomic models for the provinces plus a combined territories and rest of world model. A national model then links economic activity in one region with activity in the other regions. This model includes detailed income and expenditure categories and demographic and labour market information. The purpose of the model is to produce medium to long-term projections of the provincial economies and conduct simulation studies that require industry and demographic detail.

This modelling system consists of a set of provincial and territorial macroeconomic models that are linked through trade, financial markets and inter-provincial migration. The impact on the supply chain – in terms of output and employment – is fully captured by the multi-sector model, which incorporates the purchasing patterns from the current input-output tables. But, in contrast to an input-output model, a dynamic macroeconomic model also considers the impact on supplier's investment decisions that occur as a result of the change in economic activity.

The model produces impacts on employment, labour income, value added output, productivity, investment and exports for at least fourteen industry sectors (see list below). It also produces the impacts on government revenue by level of government and source of revenue. The dynamic nature of the model, however, makes it more challenging to develop a single summary measure that provides a “rule-of-thumb” result. The need for such a measure is satisfied by generating an average impact over the first 15 years of the simulation.

### C<sub>4</sub>SE Model – Industry Sectors

Agriculture	Finance, Insurance & Real Estate
Other Primary (detail varies by province)	Professional, Scientific & Management Services
Manufacturing (detail varies by province)	Accommodation & Food
Construction	Health Services
Utilities	Other Services
Transportation & Warehousing	Education Services
Trade	Government Services

The following sections provide the reader with more information on the structure of the individual provincial models and the national model that unites the provincial and territorial models.

## Provincial Models

The provincial and territorial models are very similar in structure – the parameters in each model differ to reflect differences in the economic experience of each region.

The provincial models are similar in nature to a general equilibrium model, but full product and factor substitution is not implemented. At present, substitution is restricted to the energy products and value-added. For purposes of manageability the model does not consider the impacts of changes in relative labour and capital costs across industry categories. There is only one wage rate and one set of cost of capital measures – construction and equipment – in the model. Changes in these measures of labour and capital costs cause labour and capital intensities to change across all sectors of the economy.

The model's economy is organized into four broad sectors. Firms employ capital and labour to produce a profit-maximizing output under a Cobb-Douglas constant-returns-to-scale technology. Households consume the domestic and foreign products and supply labour under the assumption of utility maximization. Governments purchase the domestic and foreign products and produce output. Foreigners purchase the domestic product and supply the foreign product.

There are two main markets in the model. These markets correspond to the domestic and foreign products and the labour market. Each of these markets is concerned with the determination of demands, supplies, and prices. Like most sub-national models, the Ontario model assumes that most prices are set in national markets. The presence of the National model in the system means that interest rates, exchange rates and the price of some goods and services are affected by changes in economic activity in Ontario and the rest of the country.

In sub-national economies, the movement of labour is a key factor in the adjustment of the local economy to changes in economic conditions. The C<sub>4</sub>SE's model allows net migration – and therefore the total population – to adjust over time to reflect changes in economic conditions. If the economy and employment is growing, then the demand for labour rises and net migration rises. This feature is an important consideration when examining economic impacts over one or more decades.

## National Model

The presence of the national model is what makes the C<sub>4</sub>SE's system unique. The national block adds up the economic activity across the country and uses this information to help determine prices, interest rates, exchange rates and the rest-of-country external demand for goods and services – all factors that are exogenous to other provincial modelling systems.

To see why this is important, consider an increase in one province's economy. This raises that province's demand for imports. In this system each of the other provinces sees an increase in demand for their exports to that province which, in turn, raises their own economies. The increase in economic activity will put upward pressure prices, interest rates and the exchange rate. The entire national economy, therefore, adjusts over time to the initial shock.

## Appendix I: Macroeconomic Impact of Sales Tax Reform: Tables

This appendix provides tables showing the macroeconomic impact of sales tax reform in Ontario. The tables all show the difference in the economy relative to the Status Quo scenario either in absolute (s-c) terms or percentage difference terms (%s-c). The tables show the impact over time: for each of the first five years after reform (or the average of the first five years) is introduced and for the average of years six through 25 after reform. The tables are arranged by OCC reform option as follows:

- Table 36 summarizes the impacts for the HST and OST reform options
- Table 37 to Table 39 show the impact of the sales tax reform options on households
- Table 40 to Table 42 show the impact of the sales tax reform options on businesses
- Table 43 to Table 51 show the impact of the sales tax reform options on governments
- Table 52 to Table 54 shows the impact of the sales tax reform options by industry

The reader should note that these tables represent only a summary of the impact on various economic measures generated by the C<sub>4</sub>SE's provincial economic modeling system. Year-by-year results along with information on other economic measures are available in a Microsoft Excel file available from the authors upon request.

**Table 36**

<b>Ontario Sales Tax Reform Summary Table</b> (economic impact excludes additional FDI)						
<b>Change versus Status Quo:</b>	<b>Short-run (years 1-5)</b>			<b>Long-run (years 5-25)</b>		
	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>	<b>HST</b>	<b>OST-a</b>	<b>OST-b</b>
<i>millions of 2008 dollars</i>						
Direct Sales Tax Impact	415	-491	6	415	-491	6
Total Ontario Tax Revenue Impact	375	-264	59	116	-723	-278
Total Federal Tax Revenue Impact	38	378	123	-394	-67	-375
<i>millions of 2008 dollars</i>						
Gross Domestic Product	-559	740	352	-1,596	279	-303
<i>thousands of people</i>						
Employment	-35	-14	-17	-58	-33	-38
Population	-35	-13	-17	-106	-59	-68
<i>2008 dollars</i>						
GDP per Capita	90.11	104.32	88.58	294.22	241.56	234.45
Disposable Income per Capita	71.02	96.43	53.60	62.62	31.11	-8.50
Consumption per Capita	41.91	64.82	35.22	54.87	69.46	37.63
GDP per Hour Worked (productivity)	0.23	0.16	0.16	0.37	0.29	0.29

**Table 37**

Economic Impact on Households of Sales Tax Reform Harmonization versus Status Quo: No FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1660	1567	554	-1252	-3445	-2,716
Household Spending	569	129	-339	-920	-1760	-2,616
<i>2008 dollars per person</i>						
Personal Disposable Income	131	143	111	36	-65	63
Household Spending	47	33	39	49	41	55
<i>number of people</i>						
Employment	-6,447	-22,374	-40,583	-46,932	-57,932	-58,070
<i>change in the rate</i>						
Wage Rate Growth	0.9	0.0	-0.2	-0.2	-0.2	0.0
Consumer Price Index Inflation	0.3	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.3	0.3	0.2	0.0	-0.3	0.1
Unemployment Rate	0.1	0.2	0.3	0.2	0.1	0.0

Economic Impact on Households of Sales Tax Reform Harmonization versus Status Quo: With FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1683	1628	679	-1043	-3133	-239
Household Spending	580	161	-273	-805	-1582	-949
<i>2008 dollars per person</i>						
Personal Disposable Income	132	147	118	47	-50	144
Household Spending	48	34	42	54	47	89
<i>number of people</i>						
Employment	-6,152	-21,678	-39,265	-44,833	-54,886	-36,754
<i>change in the rate</i>						
Wage Rate Growth	0.9	0.0	-0.1	-0.2	-0.2	0.0
Consumer Price Index Inflation	0.3	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.3	0.3	0.2	0.0	-0.2	0.2
Unemployment Rate	0.1	0.2	0.3	0.2	0.1	0.0

Economic Impact on Households of Sales Tax Reform Harmonization versus Status Quo: Sticky Prices						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1824	1659	720	-966	-3001	-2,637
Household Spending	670	207	-272	-876	-1635	-2,564
<i>2008 dollars per person</i>						
Personal Disposable Income	142	146	118	50	-41	65
Household Spending	54	35	38	46	43	55
<i>number of people</i>						
Employment	-4,601	-20,906	-38,898	-45,810	-55,492	-57,368
<i>change in the rate</i>						
Wage Rate Growth	0.9	0.0	-0.1	-0.2	-0.2	0.0
Consumer Price Index Inflation	0.3	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.3	0.3	0.3	0.0	-0.2	0.1
Unemployment Rate	0.0	0.2	0.3	0.2	0.1	0.0

**Table 38**

<b>Economic Impact on Households of Sales Tax Reform OST-a versus Status Quo: No FDI</b>						
<i>year(s):</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1671	1709	1405	534	-1006	-1,582
Household Spending	725	650	608	455	-9	-876
<i>2008 dollars per person</i>						
Personal Disposable Income	128	136	129	88	2	31
Household Spending	56	55	68	78	68	69
<i>number of people</i>						
Employment	-970	-7,799	-16,244	-18,477	-26,872	-33,014
<i>change in the rate</i>						
Wage Rate Growth	0.7	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.1	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.2	0.2	0.0	-0.2	-0.1
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0

<b>Economic Impact on Households of Sales Tax Reform OST-a versus Status Quo: With FDI</b>						
<i>year(s):</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1694	1771	1530	743	-693	902
Household Spending	737	681	675	571	170	797
<i>2008 dollars per person</i>						
Personal Disposable Income	130	140	136	98	17	113
Household Spending	57	57	70	82	74	104
<i>number of people</i>						
Employment	-674	-7,103	-14,924	-16,377	-23,823	-11,646
<i>change in the rate</i>						
Wage Rate Growth	0.7	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.1	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.2	0.2	0.1	-0.2	0.0
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0

<b>Economic Impact on Households of Sales Tax Reform OST-a versus Status Quo: Sticky Prices</b>						
<i>year(s):</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1828	1867	1658	853	-566	-1,506
Household Spending	817	745	716	530	132	-828
<i>2008 dollars per person</i>						
Personal Disposable Income	139	143	141	102	25	33
Household Spending	62	58	69	75	70	70
<i>number of people</i>						
Employment	1,099	-5,827	-13,950	-17,177	-24,492	-32,351
<i>change in the rate</i>						
Wage Rate Growth	0.7	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.1	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.3	0.2	0.1	-0.1	-0.1
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0



**Table 39**

Economic Impact on Households of Sales Tax Reform OST-b versus Status Quo: No FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1114	1203	779	-295	-1919	-2,470
Household Spending	349	235	121	-119	-655	-1,629
<i>2008 dollars per person</i>						
Personal Disposable Income	87	102	90	38	-48	-8
Household Spending	28	28	38	46	36	38
<i>number of people</i>						
Employment	-2,919	-9,820	-19,070	-23,063	-32,035	-37,538
<i>change in the rate</i>						
Wage Rate Growth	0.6	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.2	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.2	0.2	0.0	-0.2	-0.1
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0

Economic Impact on Households of Sales Tax Reform OST-b versus Status Quo: With FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1136	1264	904	-87	-1607	10
Household Spending	360	267	188	-4	-477	43
<i>2008 dollars per person</i>						
Personal Disposable Income	88	106	97	49	-33	73
Household Spending	29	30	41	50	42	72
<i>number of people</i>						
Employment	-2,623	-9,123	-17,748	-20,962	-28,985	-16,176
<i>change in the rate</i>						
Wage Rate Growth	0.6	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.2	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.2	0.2	0.0	-0.2	0.0
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0

Economic Impact on Households of Sales Tax Reform OST-b versus Status Quo: Sticky Prices						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Personal Disposable Income	1134	1317	959	-135	-1606	-2,390
Household Spending	354	251	158	-122	-584	-1,587
<i>2008 dollars per person</i>						
Personal Disposable Income	88	108	100	46	-29	-6
Household Spending	28	27	38	43	38	38
<i>number of people</i>						
Employment	-1,747	-9,079	-18,153	-22,991	-30,348	-36,931
<i>change in the rate</i>						
Wage Rate Growth	0.6	0.0	-0.1	-0.1	-0.2	0.0
Consumer Price Index Inflation	0.2	0.0	-0.1	-0.1	-0.1	0.0
Personal Savings Rate	0.2	0.3	0.2	0.0	-0.2	-0.1
Unemployment Rate	0.0	0.1	0.1	0.1	0.1	0.0

**Table 40**

<b>Economic Impact on Business of Sales Tax Reform Harmonization versus Status Quo: No FDI</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	759	333	-383	-1,205	-2,296	-1,596
Exports	-73	-215	-242	-95	182	610
Machinery & Equipment Investment	488	1,218	1,574	1,307	741	1,007
Non-residential Construction Investment	292	721	911	720	362	440
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.6	1.1	1.3	1.3	1.2
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.2	0.4	0.5	0.5	0.5	0.6
Unit Labour Costs	0.7	0.5	0.2	0.0	-0.2	-0.5
Real Wage	0.6	0.5	0.4	0.3	0.2	0.3
Export Prices	0.0	0.1	0.1	0.1	-0.1	-0.4

<b>Economic Impact on Business of Sales Tax Reform Harmonization versus Status Quo: With FDI</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	784	394	-255	-983	-1,953	1,699
Exports	-74	-197	-186	17	367	3,072
Machinery & Equipment Investment	521	1,257	1,621	1,365	811	1,282
Non-residential Construction Investment	298	730	923	737	386	565
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.6	1.1	1.4	1.3	1.5
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.2	0.4	0.5	0.5	0.5	0.6
Unit Labour Costs	0.7	0.5	0.2	0.0	-0.2	-0.2
Real Wage	0.6	0.5	0.5	0.3	0.2	0.5
Export Prices	0.0	0.1	0.1	0.1	-0.1	-0.3

<b>Economic Impact on Business of Sales Tax Reform Harmonization versus Status Quo: Sticky Prices</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	719	195	-468	-1,162	-2,132	-1,562
Exports	-65	-220	-279	-169	76	602
Machinery & Equipment Investment	311	918	1,387	1,366	945	1,009
Non-residential Construction Investment	176	532	807	778	505	442
<i>% rise from Status Quo levels</i>						
Capital Stock	0.1	0.5	0.9	1.2	1.3	1.2
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.2	0.3	0.5	0.5	0.5	0.6
Unit Labour Costs	0.7	0.5	0.2	0.0	-0.2	-0.4
Real Wage	0.6	0.5	0.4	0.3	0.2	0.3
Export Prices	0.0	0.1	0.1	0.1	0.0	-0.4

**Table 41**

<b>Economic Impact on Business of Sales Tax Reform OST-a versus Status Quo: No FDI</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	884	1,018	959	746	92	279
Exports	-36	-115	-125	-10	207	765
Machinery & Equipment Investment	502	1,239	1,619	1,407	911	1,016
Non-residential Construction Investment	300	729	926	759	440	444
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.7	1.1	1.4	1.4	1.3
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.3	0.4	0.4	0.4	0.5
Unit Labour Costs	0.5	0.4	0.2	0.1	-0.1	-0.7
Real Wage	0.6	0.5	0.5	0.5	0.4	0.3
Export Prices	0.0	0.1	0.1	0.0	-0.1	-0.5

<b>Economic Impact on Business of Sales Tax Reform OST-a versus Status Quo: With FDI</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	910	1,079	1,087	968	434	3,579
Exports	-37	-97	-69	101	392	3,227
Machinery & Equipment Investment	536	1,277	1,666	1,464	981	1,292
Non-residential Construction Investment	306	737	938	776	463	569
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.7	1.1	1.4	1.5	1.6
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.3	0.4	0.4	0.4	0.5
Unit Labour Costs	0.5	0.4	0.2	0.1	-0.1	-0.4
Real Wage	0.6	0.5	0.5	0.5	0.4	0.5
Export Prices	0.0	0.1	0.1	0.0	-0.1	-0.4

<b>Economic Impact on Business of Sales Tax Reform OST-a versus Status Quo: Sticky Prices</b>						
<i>year(s):</i>	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	836	891	912	820	267	309
Exports	-30	-127	-173	-96	92	758
Machinery & Equipment Investment	325	941	1,440	1,476	1,121	1,017
Non-residential Construction Investment	184	541	826	823	585	445
<i>% rise from Status Quo levels</i>						
Capital Stock	0.1	0.5	0.9	1.3	1.4	1.3
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.2	0.3	0.4	0.4	0.5
Unit Labour Costs	0.5	0.4	0.3	0.1	0.0	-0.6
Real Wage	0.6	0.5	0.5	0.5	0.4	0.3
Export Prices	0.0	0.1	0.1	0.1	0.0	-0.5

**Table 42**

Economic Impact on Business of Sales Tax Reform OST-b versus Status Quo: No FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	606	714	605	272	-439	-303
Exports	-31	-100	-94	36	270	781
Machinery & Equipment Investment	492	1,201	1,558	1,342	855	974
Non-residential Construction Investment	295	708	891	723	410	424
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.6	1.1	1.4	1.4	1.2
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.2	0.4	0.4	0.4	0.5
Unit Labour Costs	0.4	0.3	0.1	0.0	-0.2	-0.8
Real Wage	0.4	0.4	0.4	0.3	0.2	0.2
Export Prices	0.0	0.0	0.0	0.0	-0.1	-0.6

Economic Impact on Business of Sales Tax Reform OST-b versus Status Quo: With FDI						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	631	776	734	495	-96	2,996
Exports	-32	-82	-39	148	455	3,244
Machinery & Equipment Investment	526	1,240	1,605	1,399	924	1,249
Non-residential Construction Investment	301	717	904	740	434	549
<i>% rise from Status Quo levels</i>						
Capital Stock	0.2	0.6	1.1	1.4	1.4	1.5
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.2	0.4	0.4	0.4	0.5
Unit Labour Costs	0.4	0.3	0.1	0.0	-0.2	-0.5
Real Wage	0.4	0.4	0.4	0.3	0.2	0.4
Export Prices	0.0	0.0	0.0	0.0	-0.1	-0.4

Economic Impact on Business of Sales Tax Reform OST-b versus Status Quo: Sticky Prices						
year(s):	1	2	3	4	5	Average of Next 20
<i>millions of 2008 dollars</i>						
Gross Domestic Product	480	493	461	237	-348	-278
Exports	-29	-119	-145	-46	164	771
Machinery & Equipment Investment	309	892	1,368	1,403	1,060	976
Non-residential Construction Investment	177	516	786	783	553	426
<i>% rise from Status Quo levels</i>						
Capital Stock	0.1	0.4	0.9	1.2	1.3	1.2
<i>% rise from Status Quo levels</i>						
Labour Productivity	0.1	0.2	0.3	0.4	0.4	0.4
Unit Labour Costs	0.5	0.4	0.2	0.0	-0.2	-0.7
Real Wage	0.4	0.4	0.4	0.3	0.2	0.2
Export Prices	0.0	0.0	0.0	0.0	-0.1	-0.6

**Table 43**

<b>Economic Impact on Government Revenue of Sales Tax Reform Harmonization versus Status Quo: No FDI</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	448	460	110	-228	-602	-394
Direct Taxes - Persons	465	437	301	65	-233	-75
Direct Taxes - Business	-290	-190	-97	-63	-62	-185
Contributions to Social Insurance	54	31	13	3	-12	0
Direct Taxes - Non-Residents	127	141	-96	-185	-190	-98
Indirect Taxes - GST	57	10	-40	-66	-105	-37
Indirect Taxes - Other	26	23	22	15	6	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	9	7	6	2	-6	-4
<b>millions of 2008 dollars</b>						
Ontario Government	418	454	546	366	94	116
Direct Taxes - Persons	254	239	165	36	-128	-41
Direct Taxes - Business	-197	-141	-79	-52	-53	-197
Contributions to Social Insurance	30	18	7	2	-7	1
Indirect Taxes - RST	228	230	349	336	316	453
Indirect Taxes - Other	66	38	24	-7	-43	-46
Other Personal Transfers	22	20	14	3	-11	-3
Investment Income	12	9	8	4	-5	-2
<b>memo items</b>						
Gross Domestic Product	759	333	-383	-1,205	-2,296	-1,596
Population (thousands)	-1.9	-10.8	-29.9	-54.5	-78.8	-105.9
<b>2008 dollars per capita</b>						
Federal Government in Ontario	35	41	26	16	3	33
Direct Taxes - Persons	36	37	33	24	10	31
Direct Taxes - Business	-22	-14	-6	-2	-1	-9
Contributions to Social Insurance	4	3	2	2	2	3
Direct Taxes - Non-Residents	10	11	-6	-12	-11	-3
Indirect Taxes - GST	5	2	-1	-1	-2	5
Indirect Taxes - Other	2	2	3	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	2
<b>2008 dollars per capita</b>						
Ontario Government	33	41	59	61	55	72
Direct Taxes - Persons	20	20	18	13	6	17
Direct Taxes - Business	-15	-10	-5	-2	-1	-10
Contributions to Social Insurance	2	2	1	1	1	2
Indirect Taxes - RST	18	19	29	31	32	41
Indirect Taxes - Other	5	4	5	6	6	9
Other Personal Transfers	2	2	2	1	1	2
Investment Income	1	1	1	2	2	3

**Table 44**

<b>Economic Impact on Government Revenue of Sales Tax Reform Harmonization versus Status Quo: With FDI</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	454	474	139	-180	-529	196
Direct Taxes - Persons	468	446	320	96	-188	273
Direct Taxes - Business	-291	-192	-100	-66	-65	-140
Contributions to Social Insurance	55	32	15	6	-7	24
Direct Taxes - Non-Residents	128	144	-90	-176	-178	-20
Indirect Taxes - GST	58	12	-36	-60	-95	21
Indirect Taxes - Other	27	24	23	16	8	24
Other Personal Transfers	0	0	0	0	0	0
Investment Income	9	8	7	3	-4	13
<b>millions of 2008 dollars</b>						
Ontario Government	422	462	564	399	146	618
Direct Taxes - Persons	256	244	175	52	-103	150
Direct Taxes - Business	-198	-143	-81	-55	-55	-145
Contributions to Social Insurance	30	18	9	4	-4	24
Indirect Taxes - RST	229	233	355	346	330	542
Indirect Taxes - Other	66	39	26	-2	-35	30
Other Personal Transfers	22	21	15	5	-9	14
Investment Income	12	9	9	6	-3	20
<b>memo items</b>						
Gross Domestic Product	784	394	-255	-983	-1,953	1,699
Population (thousands)	-1.8	-10.4	-28.9	-52.6	-75.5	-72.0
<b>2008 dollars per capita</b>						
Federal Government in Ontario	36	42	28	18	6	52
Direct Taxes - Persons	36	37	34	25	13	42
Direct Taxes - Business	-22	-14	-6	-2	-1	-7
Contributions to Social Insurance	4	3	2	2	2	4
Direct Taxes - Non-Residents	10	11	-6	-11	-10	1
Indirect Taxes - GST	5	2	-1	-1	-1	6
Indirect Taxes - Other	2	2	3	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	2
<b>2008 dollars per capita</b>						
Ontario Government	33	41	60	62	57	84
Direct Taxes - Persons	20	20	19	14	7	23
Direct Taxes - Business	-15	-10	-5	-2	-1	-7
Contributions to Social Insurance	2	2	1	1	1	3
Indirect Taxes - RST	18	19	30	31	32	43
Indirect Taxes - Other	5	4	5	6	6	10
Other Personal Transfers	2	2	2	1	1	2
Investment Income	1	1	1	2	2	3

**Table 45**

<b>Economic Impact on Government Revenue of Sales Tax Reform Harmonization versus Status Quo: Sticky Prices</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Federal Government in Ontario	510	439	131	-158	-513	-377
Direct Taxes - Persons	455	435	321	99	-175	-61
Direct Taxes - Business	-237	-223	-125	-56	-58	-185
Contributions to Social Insurance	53	31	14	3	-9	1
Direct Taxes - Non-Residents	125	146	-68	-158	-174	-97
Indirect Taxes - GST	77	18	-39	-64	-99	-36
Indirect Taxes - Other	25	23	23	15	6	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	12	9	5	2	-4	-3
<i>millions of 2008 dollars</i>						
Ontario Government	480	440	535	394	146	130
Direct Taxes - Persons	249	238	176	54	-96	-33
Direct Taxes - Business	-161	-165	-102	-46	-49	-196
Contributions to Social Insurance	29	18	8	2	-6	2
Indirect Taxes - RST	259	243	352	339	324	455
Indirect Taxes - Other	72	43	27	-6	-40	-44
Other Personal Transfers	22	20	15	5	-8	-2
Investment Income	16	10	7	4	-3	-2
<i>memo items</i>						
Gross Domestic Product	719	195	-468	-1,162	-2,132	-1,562
Population (thousands)	-1.4	-9.1	-27.4	-51.6	-75.6	-104.5
<i>2008 dollars per capita</i>						
Federal Government in Ontario	40	39	26	19	8	33
Direct Taxes - Persons	35	36	33	25	14	31
Direct Taxes - Business	-18	-16	-8	-2	-1	-9
Contributions to Social Insurance	4	3	2	2	2	3
Direct Taxes - Non-Residents	10	11	-4	-10	-10	-3
Indirect Taxes - GST	6	2	-1	-1	-2	5
Indirect Taxes - Other	2	2	3	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	2
<i>2008 dollars per capita</i>						
Ontario Government	37	39	57	61	57	72
Direct Taxes - Persons	19	20	18	14	7	17
Direct Taxes - Business	-12	-12	-7	-1	-1	-10
Contributions to Social Insurance	2	2	1	1	1	2
Indirect Taxes - RST	20	19	29	31	32	41
Indirect Taxes - Other	6	4	5	6	6	9
Other Personal Transfers	2	2	2	1	1	2
Investment Income	1	1	1	2	2	3

**Table 46**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-a versus Status Quo: No FDI</b>						
<i>year(s):</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Federal Government in Ontario	548	623	474	259	-15	-67
Direct Taxes - Persons	434	434	402	300	95	76
Direct Taxes - Business	-132	-63	-38	-46	-49	-120
Contributions to Social Insurance	56	44	37	36	25	19
Direct Taxes - Non-Residents	63	96	-29	-131	-156	-134
Indirect Taxes - GST	81	63	47	47	24	47
Indirect Taxes - Other	35	37	42	42	40	39
Other Personal Transfers	0	0	0	0	0	0
Investment Income	10	11	12	11	7	5
<i>millions of 2008 dollars</i>						
Ontario Government	-352	-291	-120	-192	-366	-723
Direct Taxes - Persons	237	238	220	164	52	42
Direct Taxes - Business	-90	-47	-31	-38	-42	-128
Contributions to Social Insurance	31	25	22	22	16	17
Indirect Taxes - RST	-695	-671	-526	-528	-552	-769
Indirect Taxes - Other	97	92	102	99	87	81
Other Personal Transfers	21	21	20	15	6	5
Investment Income	15	15	18	18	13	11
<i>memo items</i>						
Gross Domestic Product	884	1,018	959	746	92	279
Population (thousands)	-0.3	-2.9	-10.3	-20.5	-31.8	-59.3
<i>2008 dollars per capita</i>						
Federal Government in Ontario	42	49	42	31	18	29
Direct Taxes - Persons	33	34	34	29	18	25
Direct Taxes - Business	-10	-5	-2	-2	-2	-6
Contributions to Social Insurance	4	3	3	3	3	3
Direct Taxes - Non-Residents	5	7	-2	-9	-10	-7
Indirect Taxes - GST	6	5	4	5	4	7
Indirect Taxes - Other	3	3	4	4	4	5
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	1
<i>2008 dollars per capita</i>						
Ontario Government	-27	-20	-3	-2	-7	-12
Direct Taxes - Persons	18	19	18	16	10	14
Direct Taxes - Business	-7	-3	-2	-2	-2	-6
Contributions to Social Insurance	2	2	2	2	2	2
Indirect Taxes - RST	-53	-50	-38	-37	-37	-44
Indirect Taxes - Other	7	7	9	10	10	12
Other Personal Transfers	2	2	2	1	1	1
Investment Income	1	1	2	2	2	2



**Table 47**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-a versus Status Quo: With FDI</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	554	637	502	308	58	525
Direct Taxes - Persons	437	443	421	331	140	425
Direct Taxes - Business	-133	-66	-41	-49	-52	-75
Contributions to Social Insurance	57	45	39	39	30	43
Direct Taxes - Non-Residents	65	99	-23	-122	-144	-56
Indirect Taxes - GST	82	65	51	54	34	105
Indirect Taxes - Other	35	37	43	43	42	60
Other Personal Transfers	0	0	0	0	0	0
Investment Income	10	11	13	13	8	22
<b>millions of 2008 dollars</b>						
Ontario Government	-349	-282	-102	-159	-314	-223
Direct Taxes - Persons	239	243	230	181	77	233
Direct Taxes - Business	-90	-49	-33	-41	-44	-76
Contributions to Social Insurance	31	26	23	24	19	40
Indirect Taxes - RST	-694	-668	-520	-518	-538	-684
Indirect Taxes - Other	97	93	104	104	95	157
Other Personal Transfers	21	21	20	16	8	22
Investment Income	15	16	19	19	15	33
<b>memo items</b>						
Gross Domestic Product	910	1,079	1,087	968	434	3,579
Population (thousands)	-0.2	-2.5	-9.3	-18.5	-28.5	-25.3
<b>2008 dollars per capita</b>						
Federal Government in Ontario	42	50	43	34	21	48
Direct Taxes - Persons	33	34	35	31	20	36
Direct Taxes - Business	-10	-5	-3	-3	-3	-4
Contributions to Social Insurance	4	4	3	4	3	4
Direct Taxes - Non-Residents	5	8	-1	-8	-9	-3
Indirect Taxes - GST	6	5	4	5	5	9
Indirect Taxes - Other	3	3	4	4	4	5
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	2
<b>2008 dollars per capita</b>						
Ontario Government	-26	-20	-2	0	-5	0
Direct Taxes - Persons	18	19	19	17	11	20
Direct Taxes - Business	-7	-4	-2	-2	-2	-4
Contributions to Social Insurance	2	2	2	2	2	3
Indirect Taxes - RST	-53	-50	-38	-36	-36	-42
Indirect Taxes - Other	7	7	9	10	10	13
Other Personal Transfers	2	2	2	2	1	2
Investment Income	1	1	2	2	2	3

**Table 48**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-a versus Status Quo: Sticky Prices</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	559	586	501	336	74	-51
Direct Taxes - Persons	387	426	434	338	151	89
Direct Taxes - Business	-75	-102	-73	-38	-42	-120
Contributions to Social Insurance	50	43	39	36	28	20
Direct Taxes - Non-Residents	63	102	-4	-105	-142	-133
Indirect Taxes - GST	92	69	50	51	30	48
Indirect Taxes - Other	29	35	42	42	40	39
Other Personal Transfers	0	0	0	0	0	0
Investment Income	11	12	12	12	8	6
<b>millions of 2008 dollars</b>						
Ontario Government	-354	-325	-123	-156	-310	-712
Direct Taxes - Persons	212	233	238	185	83	49
Direct Taxes - Business	-51	-76	-60	-31	-36	-128
Contributions to Social Insurance	28	25	23	22	17	17
Indirect Taxes - RST	-676	-661	-521	-523	-543	-768
Indirect Taxes - Other	88	91	106	102	91	82
Other Personal Transfers	19	20	21	17	8	5
Investment Income	16	15	17	18	14	11
<b>memo items</b>						
Gross Domestic Product	836	891	912	820	267	309
Population (thousands)	0.3	-1.0	-7.2	-16.8	-27.9	-58.0
<b>2008 dollars per capita</b>						
Federal Government in Ontario	42	45	42	35	22	29
Direct Taxes - Persons	29	33	35	31	21	26
Direct Taxes - Business	-6	-8	-5	-2	-2	-6
Contributions to Social Insurance	4	3	3	3	3	3
Direct Taxes - Non-Residents	5	8	0	-7	-9	-7
Indirect Taxes - GST	7	5	4	5	4	7
Indirect Taxes - Other	2	3	3	4	4	5
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	1
<b>2008 dollars per capita</b>						
Ontario Government	-27	-24	-5	-1	-6	-12
Direct Taxes - Persons	16	18	19	17	11	14
Direct Taxes - Business	-4	-6	-4	-2	-2	-7
Contributions to Social Insurance	2	2	2	2	2	2
Indirect Taxes - RST	-52	-50	-38	-37	-37	-44
Indirect Taxes - Other	7	7	9	9	10	12
Other Personal Transfers	1	2	2	2	1	1
Investment Income	1	1	1	2	2	2

**Table 49**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-b versus Status Quo: No FDI</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	343	393	210	-21	-309	-375
Direct Taxes - Persons	317	326	276	142	-77	-103
Direct Taxes - Business	-149	-99	-70	-63	-60	-136
Contributions to Social Insurance	39	29	22	18	7	5
Direct Taxes - Non-Residents	63	80	-61	-151	-177	-154
Indirect Taxes - GST	43	26	8	0	-27	-5
Indirect Taxes - Other	24	25	27	26	23	19
Other Personal Transfers	0	0	0	0	0	0
Investment Income	6	7	8	6	1	-1
<b>millions of 2008 dollars</b>						
Ontario Government	-28	49	208	123	-54	-278
Direct Taxes - Persons	174	178	151	78	-42	-56
Direct Taxes - Business	-102	-73	-57	-52	-51	-145
Contributions to Social Insurance	21	17	13	11	4	5
Indirect Taxes - RST	-217	-179	-24	-23	-39	-88
Indirect Taxes - Other	61	52	54	47	30	13
Other Personal Transfers	15	15	13	7	-3	-4
Investment Income	9	9	11	10	5	2
<b>memo items</b>						
Gross Domestic Product	606	714	605	272	-439	-303
Population (thousands)	-0.9	-4.8	-13.5	-25.5	-38.8	-67.5
<b>2008 dollars per capita</b>						
Federal Government in Ontario	27	33	24	14	0	13
Direct Taxes - Persons	24	26	25	19	8	16
Direct Taxes - Business	-11	-7	-5	-3	-3	-7
Contributions to Social Insurance	3	2	2	2	2	2
Direct Taxes - Non-Residents	5	6	-4	-10	-11	-8
Indirect Taxes - GST	3	2	2	2	1	4
Indirect Taxes - Other	2	2	3	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	0	1	1	1	1	1
<b>2008 dollars per capita</b>						
Ontario Government	-2	7	24	25	20	23
Direct Taxes - Persons	13	14	14	11	4	9
Direct Taxes - Business	-8	-5	-4	-3	-2	-7
Contributions to Social Insurance	2	1	1	1	1	2
Indirect Taxes - RST	-16	-13	0	1	1	1
Indirect Taxes - Other	5	4	6	6	7	9
Other Personal Transfers	1	1	1	1	0	1
Investment Income	1	1	1	1	1	2

**Table 50**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-b versus Status Quo: With FDI</b>						
<b>year(s):</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<b>millions of 2008 dollars</b>						
Federal Government in Ontario	349	407	239	27	-237	216
Direct Taxes - Persons	321	335	295	172	-31	246
Direct Taxes - Business	-150	-101	-73	-66	-62	-91
Contributions to Social Insurance	39	30	24	22	11	29
Direct Taxes - Non-Residents	65	83	-56	-142	-165	-76
Indirect Taxes - GST	44	28	12	7	-17	53
Indirect Taxes - Other	24	25	28	28	25	39
Other Personal Transfers	0	0	0	0	0	0
Investment Income	6	7	8	7	3	16
<b>millions of 2008 dollars</b>						
Ontario Government	-25	57	226	156	-2	223
Direct Taxes - Persons	175	183	161	94	-17	135
Direct Taxes - Business	-102	-75	-60	-55	-53	-93
Contributions to Social Insurance	22	17	14	13	7	27
Indirect Taxes - RST	-216	-176	-18	-14	-24	0
Indirect Taxes - Other	61	52	57	52	38	89
Other Personal Transfers	15	16	14	9	-1	13
Investment Income	9	10	12	12	7	24
<b>memo items</b>						
Gross Domestic Product	631	776	734	495	-96	2,996
Population (thousands)	-0.8	-4.4	-12.5	-23.5	-35.5	-33.6
<b>2008 dollars per capita</b>						
Federal Government in Ontario	27	33	25	16	4	32
Direct Taxes - Persons	25	27	26	21	10	27
Direct Taxes - Business	-11	-7	-5	-4	-3	-5
Contributions to Social Insurance	3	2	2	2	2	3
Direct Taxes - Non-Residents	5	6	-4	-10	-11	-4
Indirect Taxes - GST	3	2	2	2	1	6
Indirect Taxes - Other	2	2	3	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	0	1	1	1	1	2
<b>2008 dollars per capita</b>						
Ontario Government	-1	7	25	26	22	34
Direct Taxes - Persons	14	15	14	11	6	15
Direct Taxes - Business	-8	-5	-4	-3	-3	-5
Contributions to Social Insurance	2	1	1	1	1	2
Indirect Taxes - RST	-16	-13	0	2	2	3
Indirect Taxes - Other	5	4	6	7	7	10
Other Personal Transfers	1	1	1	1	1	1
Investment Income	1	1	1	2	1	2

**Table 51**

<b>Economic Impact on Government Revenue of Sales Tax Reform OST-b versus Status Quo: Sticky Prices</b>						
<i>year(s):</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average of Next 20</b>
<i>millions of 2008 dollars</i>						
Federal Government in Ontario	448	384	208	34	-236	-356
Direct Taxes - Persons	321	341	299	158	-37	-88
Direct Taxes - Business	-86	-140	-103	-46	-48	-136
Contributions to Social Insurance	38	30	23	17	8	5
Direct Taxes - Non-Residents	77	87	-53	-126	-159	-152
Indirect Taxes - GST	63	33	8	-1	-24	-4
Indirect Taxes - Other	24	24	27	25	22	19
Other Personal Transfers	0	0	0	0	0	0
Investment Income	10	8	7	6	2	0
<i>millions of 2008 dollars</i>						
Ontario Government	59	48	192	139	-17	-264
Direct Taxes - Persons	176	187	164	86	-20	-48
Direct Taxes - Business	-58	-104	-84	-38	-41	-145
Contributions to Social Insurance	21	17	14	11	5	5
Indirect Taxes - RST	-185	-168	-24	-26	-35	-86
Indirect Taxes - Other	74	57	54	45	30	15
Other Personal Transfers	15	16	14	8	-1	-3
Investment Income	13	11	10	10	6	3
<i>memo items</i>						
Gross Domestic Product	480	493	461	237	-348	-278
Population (thousands)	-0.5	-3.8	-12.1	-24.0	-37.3	-66.4
<i>2008 dollars per capita</i>						
Federal Government in Ontario	34	31	23	17	5	13
Direct Taxes - Persons	25	27	26	20	10	17
Direct Taxes - Business	-7	-10	-7	-2	-2	-7
Contributions to Social Insurance	3	2	2	2	2	2
Direct Taxes - Non-Residents	6	7	-4	-8	-10	-8
Indirect Taxes - GST	5	3	1	2	1	4
Indirect Taxes - Other	2	2	2	3	3	4
Other Personal Transfers	0	0	0	0	0	0
Investment Income	1	1	1	1	1	1
<i>2008 dollars per capita</i>						
Ontario Government	5	6	22	25	22	23
Direct Taxes - Persons	14	15	15	11	6	9
Direct Taxes - Business	-4	-8	-6	-2	-2	-7
Contributions to Social Insurance	2	1	1	1	1	2
Indirect Taxes - RST	-14	-12	0	1	1	1
Indirect Taxes - Other	6	5	5	6	7	9
Other Personal Transfers	1	1	1	1	1	1
Investment Income	1	1	1	1	1	2

**Table 52**

Harmonization versus Status Quo: No FDI					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	5	-0.6	553	1.8	1.7
Other Primary	7	-0.1	1,026	1.8	1.6
Manufacturing	310	-4.6	1,226	1.8	1.6
Utilities	-12	-0.4	1,912	1.6	1.7
Construction	16	-3.3	702	1.8	1.8
Transportation & Warehousing	-32	-2.7	672	1.6	1.8
Wholesale & Retail Trade	32	-8.3	609	1.8	1.7
Finance, Insurance & Real Estate	-784	-5.1	1,591	1.6	1.8
Professional, Scientific & Management Services	-36	-9.8	593	1.7	1.8
Accommodation & Food Services	-41	-4.7	250	1.5	1.8
Education Services	-198	-3.5	0	-0.6	0.0
Health & Social Services	-253	-4.8	0	-0.4	0.0
Other Private Services	-80	-3.2	659	1.5	1.8
Government Services	-223	-2.4	0	-0.5	0.0

Harmonization versus Status Quo: With FDI					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	17	-0.5	605	2.0	1.8
Other Primary	12	-0.1	1,131	1.9	1.7
Manufacturing	927	-1.2	1,206	2.0	1.4
Utilities	28	-0.3	2,105	1.9	1.8
Construction	210	-1.5	758	2.3	1.8
Transportation & Warehousing	11	-2.5	733	1.8	1.8
Wholesale & Retail Trade	220	-6.8	664	2.0	1.8
Finance, Insurance & Real Estate	-76	-2.8	1,648	1.9	1.6
Professional, Scientific & Management Services	170	-8.2	644	1.9	1.8
Accommodation & Food Services	-3	-4.0	270	1.7	1.8
Education Services	-119	-2.1	0	-0.4	0.0
Health & Social Services	-155	-2.9	0	-0.3	0.0
Other Private Services	84	-1.5	664	1.8	1.5
Government Services	-145	-1.6	0	-0.3	0.0

Harmonization versus Status Quo: Sticky Prices					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	5	-0.6	545	1.8	1.7
Other Primary	7	-0.1	1,014	1.7	1.6
Manufacturing	303	-4.5	1,209	1.8	1.6
Utilities	-11	-0.4	1,884	1.6	1.7
Construction	16	-3.2	692	1.8	1.7
Transportation & Warehousing	-31	-2.7	661	1.6	1.7
Wholesale & Retail Trade	33	-8.1	599	1.7	1.7
Finance, Insurance & Real Estate	-770	-5.0	1,566	1.5	1.7
Professional, Scientific & Management Services	-36	-9.7	584	1.7	1.7
Accommodation & Food Services	-40	-4.7	246	1.5	1.7
Education Services	-195	-3.4	0	-0.6	0.0
Health & Social Services	-248	-4.7	0	-0.4	0.0
Other Private Services	-78	-3.1	649	1.4	1.7
Government Services	-219	-2.3	0	-0.5	0.0

GDP: millions of 2008 dollars

Employment: thousands

Productivity: 2008 dollars per worker

Capital Stock: percent difference

Capital-Output Ratio: percent difference

**Table 53**

OST-a versus Status Quo: No FDI					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	13	-0.4	440	1.8	1.6
Other Primary	12	0.0	773	1.8	1.5
Manufacturing	458	-2.3	978	1.8	1.5
Utilities	12	-0.3	1,511	1.7	1.6
Construction	147	-1.1	559	2.0	1.6
Transportation & Warehousing	11	-1.8	535	1.7	1.6
Wholesale & Retail Trade	194	-4.5	485	1.8	1.6
Finance, Insurance & Real Estate	-282	-3.1	1,268	1.7	1.6
Professional, Scientific & Management Service	113	-6.0	473	1.7	1.6
Accommodation & Food Services	7	-2.6	199	1.7	1.6
Education Services	-96	-1.7	0	-0.3	0.0
Health & Social Services	-121	-2.3	0	-0.2	0.0
Other Private Services	-11	-1.9	525	1.6	1.6
Government Services	-115	-1.2	0	-0.2	0.0

OST-a versus Status Quo: With FDI					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	25	-0.3	492	2.1	1.7
Other Primary	16	0.0	878	1.9	1.5
Manufacturing	1,075	1.0	959	2.0	1.3
Utilities	51	-0.2	1,705	2.0	1.6
Construction	342	0.7	615	2.5	1.7
Transportation & Warehousing	54	-1.6	596	1.9	1.7
Wholesale & Retail Trade	383	-3.1	540	2.1	1.7
Finance, Insurance & Real Estate	426	-0.8	1,325	2.0	1.5
Professional, Scientific & Management Service	320	-4.4	523	2.0	1.7
Accommodation & Food Services	45	-1.8	219	1.9	1.6
Education Services	-16	-0.3	0	-0.1	0.0
Health & Social Services	-23	-0.5	0	-0.1	0.0
Other Private Services	153	-0.2	531	1.9	1.4
Government Services	-37	-0.4	0	-0.1	0.0

OST-a versus Status Quo: Sticky Prices					
	Average of years 5-25				
	GDP	Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	13	-0.3	431	1.8	1.6
Other Primary	11	0.0	761	1.7	1.5
Manufacturing	451	-2.3	960	1.8	1.5
Utilities	13	-0.3	1,483	1.6	1.6
Construction	148	-1.0	548	2.0	1.6
Transportation & Warehousing	11	-1.7	524	1.6	1.6
Wholesale & Retail Trade	195	-4.3	475	1.8	1.6
Finance, Insurance & Real Estate	-269	-3.0	1,242	1.6	1.6
Professional, Scientific & Management Service	114	-5.9	463	1.7	1.6
Accommodation & Food Services	7	-2.5	195	1.6	1.6
Education Services	-93	-1.6	0	-0.3	0.0
Health & Social Services	-116	-2.2	0	-0.2	0.0
Other Private Services	-9	-1.9	515	1.6	1.6
Government Services	-111	-1.2	0	-0.2	0.0

GDP: millions of 2008 dollars

Employment: thousands

Productivity: 2008 dollars per worker

Capital Stock: percent difference

Capital-Output Ratio: percent difference

**Table 54**

<b>OST-b versus Status Quo: No FDI</b>					
	GDP	Average of years 5-25			
		Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	10	-0.4	428	1.8	1.6
Other Primary	11	0.0	748	1.7	1.5
Manufacturing	419	-2.4	951	1.8	1.5
Utilities	3	-0.3	1,467	1.6	1.6
Construction	99	-1.5	543	1.9	1.6
Transportation & Warehousing	-4	-1.9	520	1.6	1.6
Wholesale & Retail Trade	99	-5.5	471	1.7	1.6
Finance, Insurance & Real Estate	-401	-3.4	1,231	1.6	1.6
Professional, Scientific & Management Services	59	-6.5	459	1.7	1.6
Accommodation & Food Services	-9	-3.0	193	1.6	1.6
Education Services	-121	-2.1	0	-0.3	0.0
Health & Social Services	-154	-2.9	0	-0.2	0.0
Other Private Services	-38	-2.2	510	1.5	1.6
Government Services	-136	-1.4	0	-0.3	0.0

<b>OST-b versus Status Quo: With FDI</b>					
	GDP	Average of years 5-25			
		Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	23	-0.3	480	2.0	1.7
Other Primary	16	0.0	853	1.9	1.5
Manufacturing	1,036	0.9	931	2.0	1.3
Utilities	42	-0.2	1,660	1.9	1.6
Construction	294	0.2	599	2.4	1.7
Transportation & Warehousing	39	-1.7	580	1.8	1.7
Wholesale & Retail Trade	287	-4.0	526	2.0	1.7
Finance, Insurance & Real Estate	307	-1.1	1,288	1.9	1.5
Professional, Scientific & Management Services	265	-4.9	509	1.9	1.6
Accommodation & Food Services	29	-2.2	213	1.8	1.6
Education Services	-41	-0.7	0	-0.1	0.0
Health & Social Services	-56	-1.1	0	-0.1	0.0
Other Private Services	126	-0.5	515	1.8	1.4
Government Services	-58	-0.6	0	-0.2	0.0

<b>OST-b versus Status Quo: Sticky Prices</b>					
	GDP	Average of years 5-25			
		Employment	Labour Productivity	Capital Stock	Capital-Output Ratio
Agriculture	10	-0.4	420	1.7	1.6
Other Primary	11	0.0	736	1.7	1.4
Manufacturing	410	-2.4	933	1.7	1.5
Utilities	3	-0.3	1,439	1.6	1.5
Construction	99	-1.5	533	1.8	1.6
Transportation & Warehousing	-4	-1.9	509	1.6	1.6
Wholesale & Retail Trade	98	-5.3	461	1.7	1.6
Finance, Insurance & Real Estate	-393	-3.3	1,206	1.5	1.6
Professional, Scientific & Management Services	57	-6.4	450	1.6	1.6
Accommodation & Food Services	-9	-2.9	189	1.5	1.6
Education Services	-118	-2.1	0	-0.3	0.0
Health & Social Services	-151	-2.8	0	-0.2	0.0
Other Private Services	-37	-2.1	499	1.5	1.6
Government Services	-134	-1.4	0	-0.3	0.0

GDP: millions of 2008 dollars

Employment: thousands

Productivity: 2008 dollars per worker

Capital Stock: percent difference

Capital-Output Ratio: percent difference



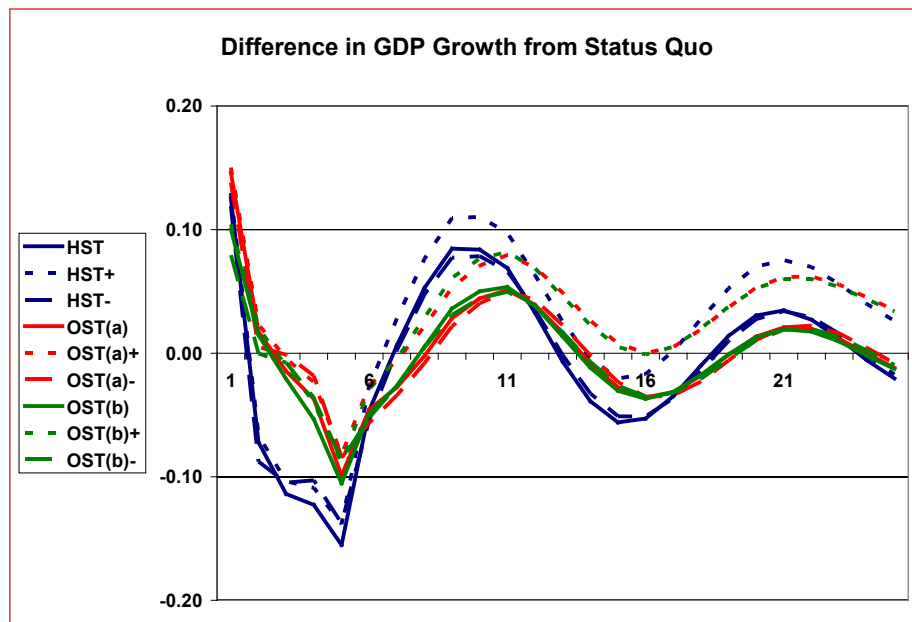
## Appendix J: Macroeconomic Impact of Sales Tax Reform: Charts

This appendix provides a series of charts showing the year-by-year macroeconomic impact of sales tax reform in Ontario. The charts all show the difference in the economy relative to the Status Quo scenario either in absolute (s-c) terms or percentage difference terms (%s-c). The charts show the impact of the HST reform option in blue. The HST reform option with additional FDI (HST+) is shown with the blue dots and the HST reform option with sticky prices (HST-) is shown with the blue dashes. The OST-a reform option cases are shown in red while the OST-b reform option cases are shown in green.

Charts are shown for the following economic measures:

- Figure 15 shows the Difference in GDP Growth
- Figure 16 shows the Difference in GDP per Capita Growth
- Figure 17 shows the Difference in Labour Productivity Growth
- Figure 18 shows the Difference in CPI Inflation
- Figure 19 shows the Difference in Wage Rate Growth
- Figure 20 shows the Change in Total Ontario Government Revenue
- Figure 21 shows the Change in Ontario Government's Tax Revenue as a Share of GDP

**Figure 15**



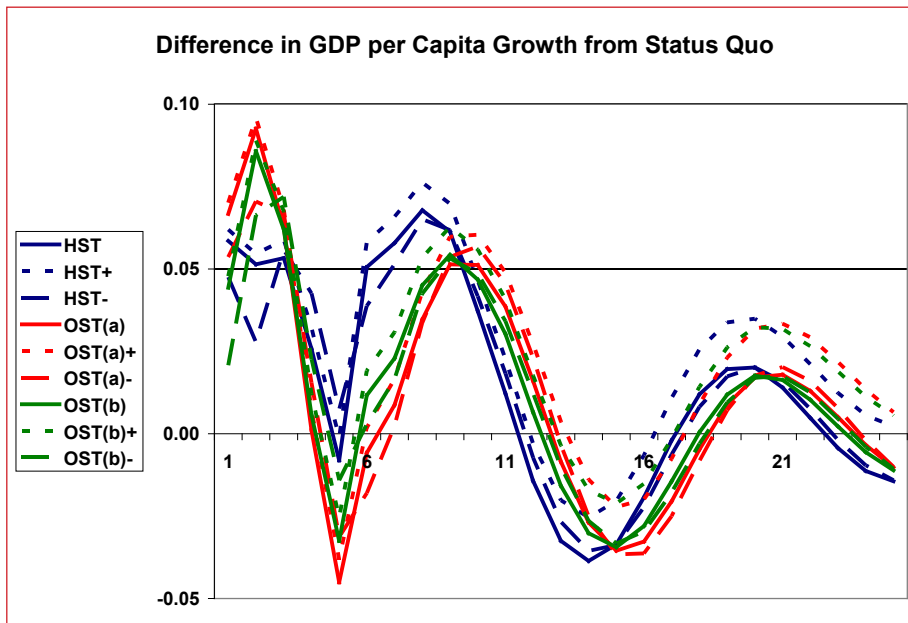
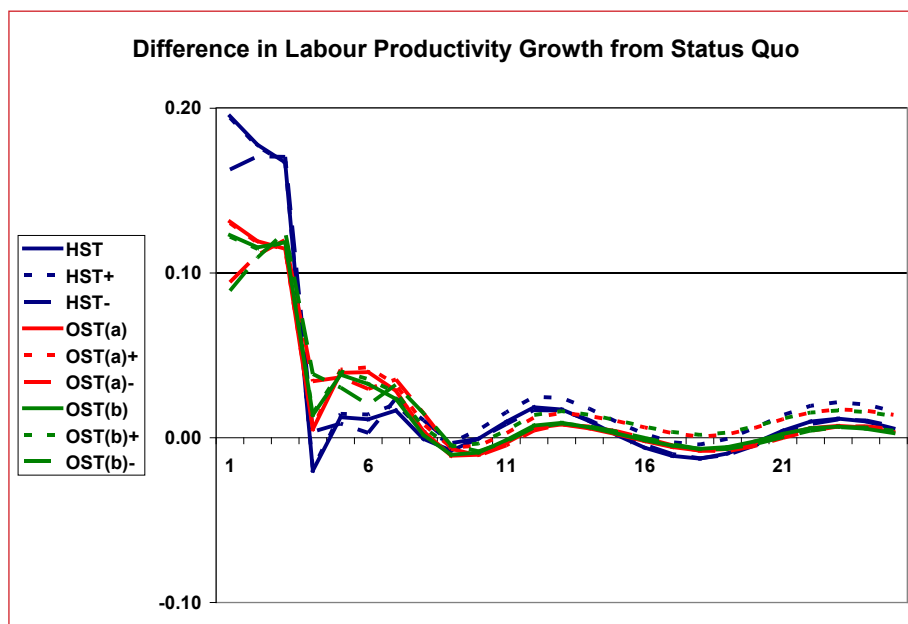
**Figure 16****Figure 17**

Figure 18

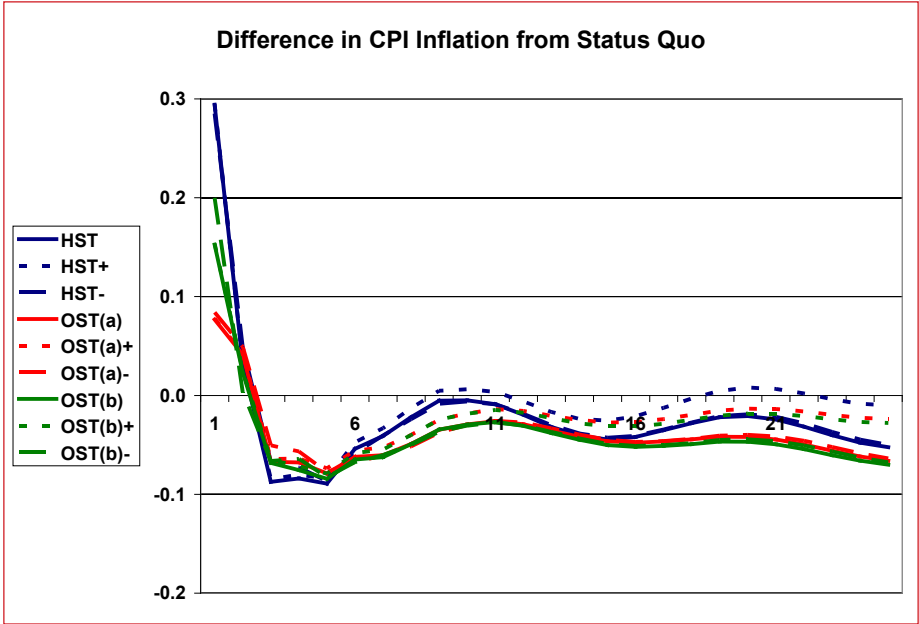
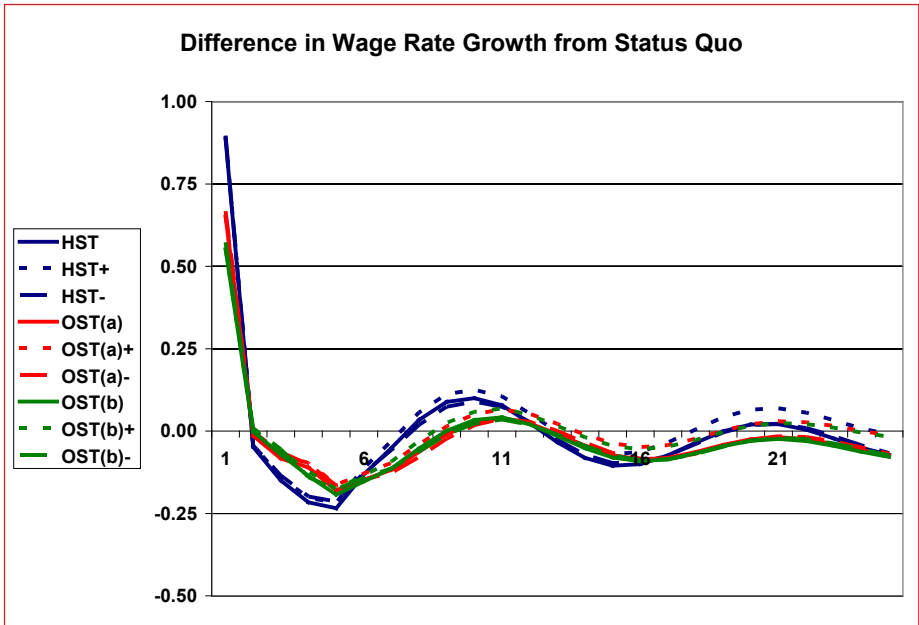
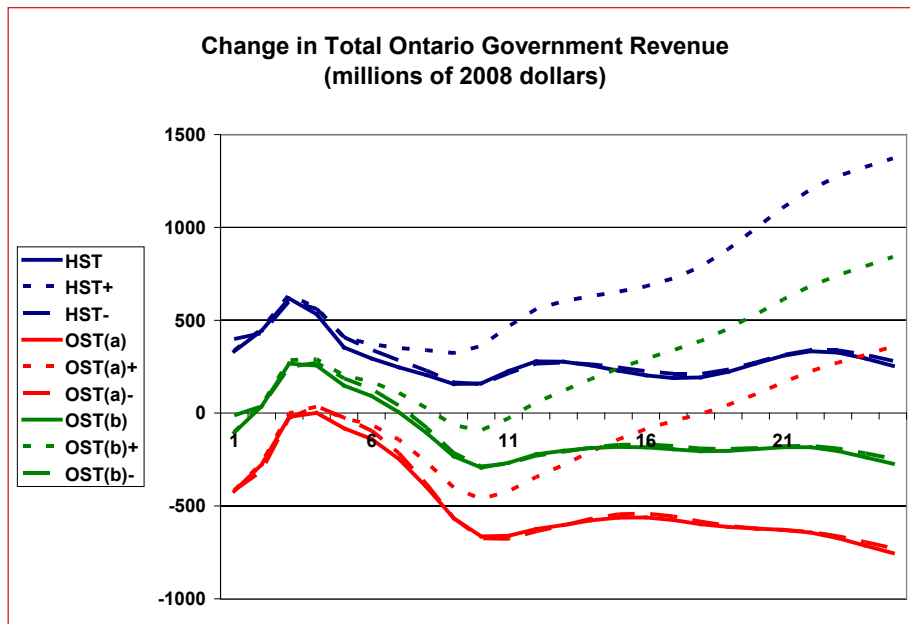


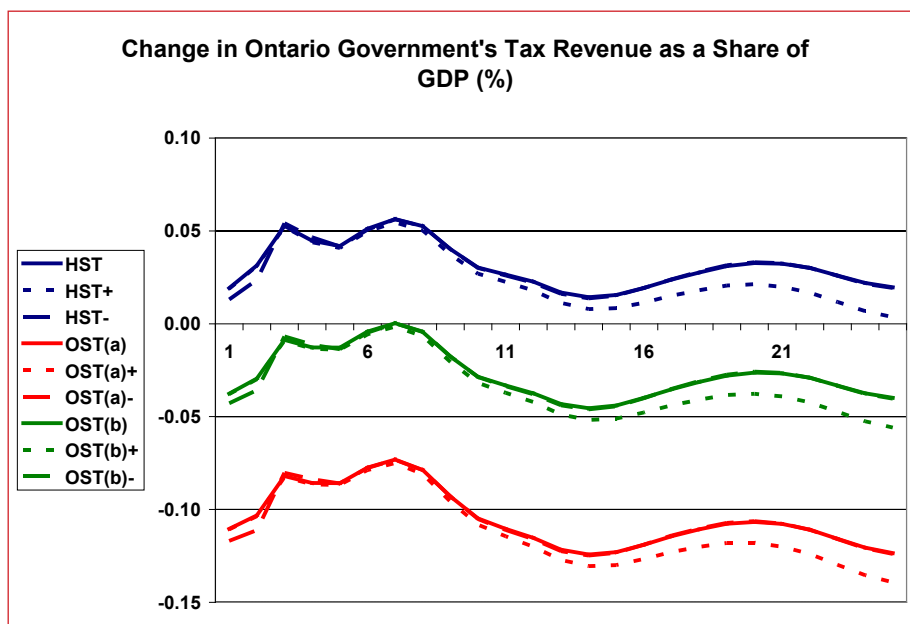
Figure 19



**Figure 20**



**Figure 21**







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