

# Consumption Taxation

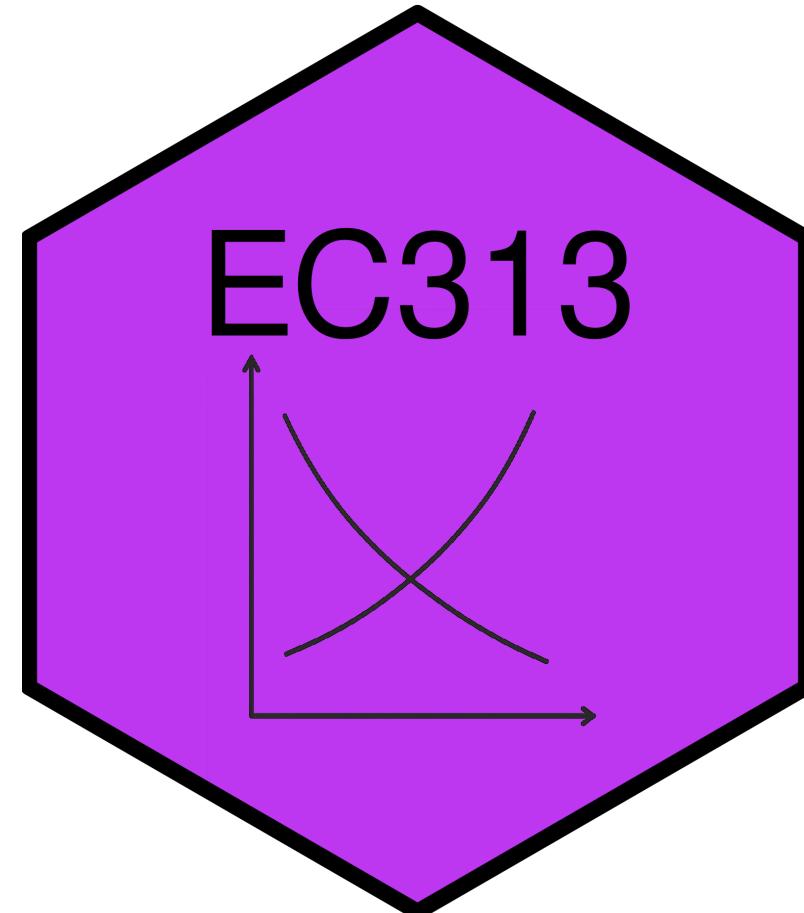
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EC313 - Public Economics: Taxation

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# Goals of This Section



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- Define and discuss types of consumption taxes
- Analyze the efficiency and equity implications of consumption taxes
- Introduce and discuss value added taxes and retail sales taxes
- Summarize Canada's consumption taxation
- Compare consumption taxes to income taxes



# Overview



# Introduction

- As we know, purchases of final goods are taxed
- These taxes are called **consumption taxes**
- There are several types charged depending on province of residence and the type of good or service purchased
  - They have features that distinguish them from each other
- In this section we outline the different types of taxes and discuss their merits

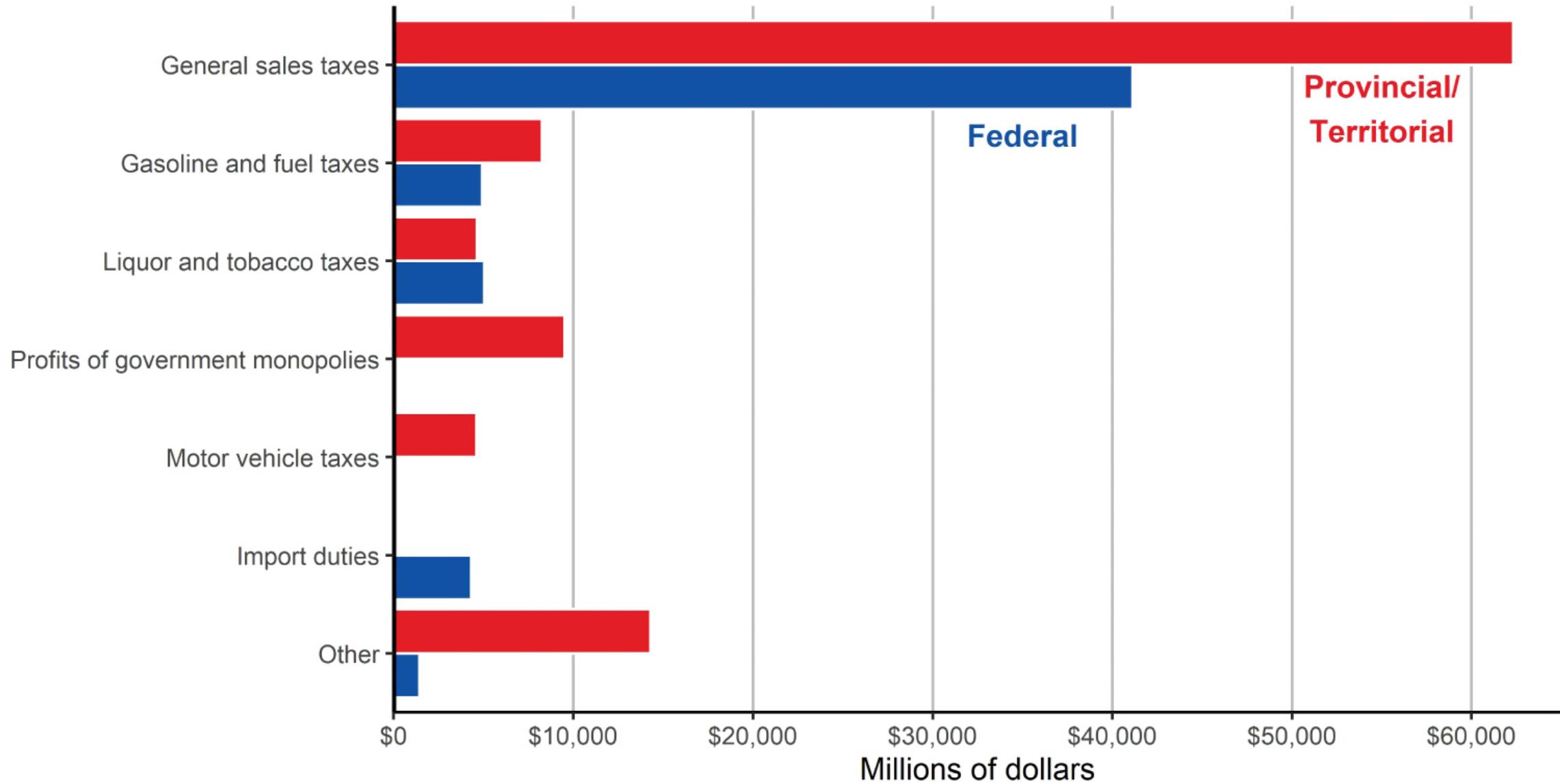


# Types of Consumption Taxes

- Value Added Tax (VAT)
  - Charged at each stage of production based on the value added at that stage
  - Used globally for taxation of consumption
- Retail Sales Tax (RST)
  - Charged only at the point of sale to the final consumer
  - Used in some provinces in Canada
- Excise Taxes
  - Charged on specific goods, often to discourage consumption (e.g., tobacco, alcohol)
  - Used in all provinces in Canada and by federal government
- Custom Duties (tariffs)
  - Charged on goods imported into the country
  - Used by federal government only



# Revenue from Consumption Taxes



# Reasons for Consumption Taxes



# Administrative Ease

- Relative to other taxes, consumption taxes are easy to administer
- Import duties are collected at the time of importation
  - In the past, relatively few items were imported
  - Much more now, but still straightforward to collect
- Sales taxes are collected from retailers
  - Lots of retailers to collect from, but less than for income tax
  - Some complications can arise for taxable and non-taxable goods
    - Example: Less than 6 baked goods at a time are taxable, but 6 or more is non-taxable
    - Some basic groceries are zero rated



# Efficiency

- Economists argue that consumption taxes are more efficient than income taxes
- Because they do not distort savings behaviour
  - Income taxes reduce the return to saving
  - Consumption taxes do not affect the return to saving
- Example on next slide illustrates this using two period model
  - Assume individuals live for two periods
  - One person earns income in period 1 and consumes it all
  - Another person earns income in period 1, saves some, and consumes in period 2
  - Tax rate on income is 50%, tax rate on consumption is 100%, and interest rate is 10%



# Efficiency

|                               | Inc Tax<br>Homer | Inc Tax<br>Marge | Cons Tax<br>Homer | Cons Tax<br>Marge |
|-------------------------------|------------------|------------------|-------------------|-------------------|
| Item                          |                  |                  |                   |                   |
| Income in period 1            | 100.00           | 100.00           | 100.00            | 100.00            |
| Taxes in period 1             | 50.00            | 50.00            | 50.00             | 26.19             |
| Consumption in period 1       | 50.00            | 25.61            | 50.00             | 26.19             |
| Savings in period 1           | 0.00             | 24.39            | 0.00              | 47.62             |
| Interest earnings in period 2 | 0.00             | 2.44             | 0.00              | 4.76              |
| Taxes in period 2             | 0.00             | 1.22             | 0.00              | 26.19             |
| Consumption in period 2       | 0.00             | 25.61            | 0.00              | 26.19             |
| PDV of taxes                  | 50.00            | 51.11            | 50.00             | 50.00             |

# Efficiency

- Under the income tax
  - Saving is discouraged because the return is less
  - Marge pays more in present discounted value of taxes (51.11) than Homer (50.00)
    - So there is a lack of horizontal equity
    - Marge and Homer are not taxed the same for the same lifetime income
- Under the consumption tax
  - Saving is not discouraged because the return is unaffected
  - Marge and Homer pay the same present discounted value of taxes (50.00)
    - So there is horizontal equity
    - Marge and Homer are taxed the same for the same lifetime income



# Efficiency

- There is still an excess burden from the consumption tax
  - Consumption tax distorts choice between consumption and leisure
  - People will substitute towards leisure, creating excess burden
- Studies show that the consumption tax has lower excess burden than income tax



# Equity

- Progressiveness: consumption taxes are often criticized for being regressive
  - Lower income individuals spend a larger share of their annual income on consumption
  - But, it is less regressive if we consider
    - Lifetime income rather than annual income
    - Tax credits and transfers that offset regressiveness
- Gender: consumption tax incidents may not be gender neutral
  - Some products targeted to women may have higher prices
  - A tax levied on product prices may then have a higher incidence for women



# Equity

- Ability to pay: taxes are levied on actual rather than potential consumption
  - Targeted towards chosen spending patterns rather than ability to pay
  - A penny-pinching rich person can pay less tax than a poor person
- Annual versus lifetime equity: income taxes may generate different lifetime tax burdens
  - Example we covered before with Homer and Marge
  - Income taxes generated more tax for Marge because she saved
  - Consumption taxes generate more even lifetime tax burden



# Value Added Taxes



# Introduction

- Value Added Taxes (VAT) are the most common form of consumption tax globally
- In Canada, the GST and HST are VATs
- Prior to GST, Canada used a the Federal Sales Tax (FST)
  - Sales tax charged at the manufacturing level
- The FST had a number of problems
  - Small tax base required high tax rates to collect enough revenue
  - \*\* Tax Cascading\*\*: taxes charged on manufacturing inputs to other manufactured goods
    - E.g., tax on steel used to make cars
    - Taxes were charged on the steel and then again on the car
    - Means taxes were charged on top of taxes



# Introduction

- FST was also complex to administer
- GST replaced FST in 1991
  - Broader tax base allowed for lower tax rates
  - Value added method of taxation eliminated tax cascading
  - Input tax credits simplified administration for businesses
- Original GST rate was 7%
  - Lowered to 6% in 2006, and 5% in 2008
- Replaced by HST in some provinces starting in 1997
  - HST combines federal GST and provincial sales tax into single value added tax
  - Current provinces usng HST are: NS, NB, NL, ON, PEI



# Introduction

- BC had HST from 2010 to 2013
  - Reverted back to separate GST and PST after a referendum
  - Former premier Vander Zalm argued HST was a tax increase
    - Tax applied to more goods and services than PST



# How Value Added Taxes Work

- Production of a final good occurs in several stages
  - At each stage, value is added to the good
  - Value added is the difference between sales revenue and cost of inputs
- Example: Production of a table
  - Stage 1: Logger sells logs for \$100
    - Value added =  $\$100 - \$0 = \$100$
  - Stage 2: Lumber mill buys logs for \$100, sells lumber for \$150
    - Value added =  $\$150 - \$100 = \$50$
  - Stage 3: Furniture maker buys lumber for \$150, sells table for \$300
    - Value added =  $\$300 - \$150 = \$150$



# How Value Added Taxes Work

- Taxes are levied on value added at each stage
- Total tax is the sum of taxes at each stage
- Equivalent to a single tax on the final sale price
- Next slide has example of VAT
  - Based on production of bread



# How Value Added Taxes Work

TABLE I9.I

Implementation of a Value-Added Tax (VAT)

| Producer | Purchases | Sales   | Value Added | VAT at<br>10 Percent Rate |
|----------|-----------|---------|-------------|---------------------------|
| Farmer   | \$ 0      | \$ 400  | \$ 400      | \$ 40                     |
| Miller   | 400       | 700     | 300         | 30                        |
| Baker    | 700       | 950     | 250         | 25                        |
| Grocer   | 950       | 1,000   | 50          | 5                         |
| Total    | \$2,050   | \$3,050 | \$1,000     | \$100                     |



# How Value Added Taxes Work

- How does government collect tax only on value added at each stage?
- Uses an **invoice-credit method**
  - At each stage firm pays tax on *total sales*
  - But claims a credit for taxes paid by suppliers
- Using the bread example:
  - Farmer sells wheat for \$400, pays \$40 in tax
  - Miller sells flour for \$700, pays \$70 in tax, claims \$40 credit, remits \$30
  - Baker sells bread for \$950, pays \$95 in tax, claims \$70 credit, remits \$25
  - Grocer sells bread for \$1000, pays \$100 in tax, claims \$95 credit, remits \$5



# Implementation Issues

- Some issues make the administration more complex
  - Some goods and services are zero rated from VAT
    - Examples: basic food, prescription drugs, medical devices
  - Firms with annual sales below \$30,000 do not remit HST/GST
  - Treatment of investment assets (e.g. machines)
    - Not clear whether to include full value, depreciated value, or none of it to compute tax liability
    - In Canada, usually none of it is included



# Implementation Issues

- There is a difference between **zero-rated** and **exempt** goods/services
  - Zero-rated: tax rate is 0%, firms can claim input tax credits
  - Exempt: no tax charged, firms cannot claim input tax credits
- If goods are exempt at retail stage, it appears the same
  - No tax collected on both zero-rated and exempt goods/services
- But there are implications for embedded taxes
  - Exempt goods/services have embedded taxes that cannot be claimed back



# Implementation Issues

**TABLE I9.2**

## Value-Added Tax with Zero-Rated and Tax-Exempt Items

### A. Value-Added Tax with Groceries Zero-Rated

| Producer | Purchases | Sales  | Tax on Sales | Credit Allowed | Tax Due |
|----------|-----------|--------|--------------|----------------|---------|
| Farmer   | \$ 0      | \$ 400 | \$ 40        | \$ 0           | \$ 40   |
| Miller   | 400       | 700    | 70           | 40             | 30      |
| Baker    | 700       | 950    | 95           | 70             | 25      |
| Grocer   | 950       | 1,000  | 0            | 95             | -95     |
| Total    |           |        |              |                | \$ 0    |

### B. Value-Added Tax with Groceries Tax-Exempt

| Producer | Purchases | Sales  | Tax on Sales | Credit Allowed | Tax Due |
|----------|-----------|--------|--------------|----------------|---------|
| Farmer   | \$ 0      | \$ 400 | \$ 40        | \$ 0           | \$ 40   |
| Miller   | 400       | 700    | 70           | 40             | 30      |
| Baker    | 700       | 950    | 95           | 70             | 25      |
| Grocer   | 950       | 1,000  | 0            | 0              | 0       |
| Total    |           |        |              |                | \$ 95   |

### C. Value-Added Tax with Milled Flour Tax-Exempt

| Producer | Purchases | Sales  | Tax on Sales | Credit Allowed | Tax Due |
|----------|-----------|--------|--------------|----------------|---------|
| Farmer   | \$ 0      | \$ 400 | \$ 40        | \$ 0           | \$ 40   |
| Miller   | 400       | 700    | 0            | 0              | 0       |
| Baker    | 700       | 950    | 95           | 0              | 95      |
| Grocer   | 950       | 1,000  | 100          | 95             | 5       |
| Total    |           |        |              |                | \$140   |



# Efficiency

- We have previously discussed efficient taxes
  - Low excess burden, minimal distortions to behaviour
- Is it inefficient to add a VAT when we already have income taxes?
  - If income tax is already optimal, adding VAT creates distortions and inefficiencies
  - If it is not optimal, VAT may improve efficiency by reducing income tax distortions



# Improvements to GST

- Economists like VATs like GST, but citizens do not
- There are ways to improve it
- Harmonization
  - The HST is an improvement over separate GST and PST
  - Reduces compliance costs for businesses
- Compliance costs
  - For GST/HST, firms must track taxes collected and input tax credits
  - Difficult for firms initially because they did not have appropriate systems
  - Keeping track of exempt items is also difficult
  - Need to make improvements to make tax more efficient



# Improvements to GST

## Which types of items qualified for the GST/HST break

No GST/HST was charged on certain qualifying items from December 14, 2024, to February 15, 2025.

### Types of items that qualified for the GST/HST break

|   |   |
|---|---|
|  Food  | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 11, 2024</span>   |
|  Beverages   | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 11, 2024</span>   |
|  Restaurants, catering, and other food or drink establishments | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 6, 2024</span>    |
|  Children's clothing and footwear                              | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span>   |
|  Children's diapers  | <a href="#">Details, examples, and restrictions</a>    |
|  Children's car seats  | <a href="#">Details, examples, and restrictions</a>    |
|  Children's toys   | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span>   |
|  Jigsaw puzzles  | New or used jigsaw puzzles for all ages qualified<br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span>   |
|  Video game consoles, controllers, and physical video games  | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span> |
|  Physical books  | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span> |
|  Printed newspapers  | <a href="#">Details, examples, and restrictions</a>    |
|  Christmas and similar decorative trees                      | <a href="#">Details, examples, and restrictions</a> <br><span style="background-color: #0070C0; color: white; padding: 2px 5px;">Updated: December 17, 2024</span> |



# Improvements to GST

Business | News

## Did the two-month GST holiday make a difference for Canadian businesses?

By Allison Bamford

Published: February 14, 2025 at 5:00AM EST

Ottawa's temporary GST and HST holiday was touted as a tax break that would put more money back into the pockets of Canadians. Though the two-month tax break might have benefitted some consumers, it was a flop for many small businesses.

"If anything, it just led to more confusing conversations with our customers in-store who thought it applied to everything," said Cole Thorpe, owner of Saskatoon clothing store Prairie Proud.

Ottawa temporarily paused GST and HST on certain items from Dec. 14 to Feb. 15, one of the busiest times of year for retailers.

"At the beginning, it was a monster headache on the eve of a very important season for a lot of small business owners. Getting those point-of-sale machines and figuring out what products the holiday applied to was a bit of a Herculean task."

In some cases, stores spent hundreds of hours checking inventory, line after line, to see what items applied. Other businesses spent upwards of \$1,000 on IT support to get new systems into place.



# Improvements to GST

- Increase tax base by taxing basic groceries?
  - Reduces compliance costs
  - Politically difficult
- Tax-inclusive pricing
  - In other parts of the world, prices include all taxes
  - In North America, prices are shown before tax
  - Economists prefer tax to be visible, but inclusive pricing is simpler



# Provincial Sales Taxes



# Introduction

- As noted, some provinces combine GST and PST
  - GST is a value added tax (VAT)
  - PST is a retail sales tax (RST)
- RSTs are generally charged only at the point of sale to final consumer
  - No input tax credits for businesses
- BC, MB, SK, QC all have PST
  - AB has no PST



# RST vs VAT

- An RST can be equivalent to VAT when
  - Rate is the same
  - Tax base is the same
  - RST is charged only on final sales
- In bread example, RST would be charged only by grocer
  - Grocer sells bread for \$1000, pays \$100 in RST
  - Sum of VAT amounts is also \$100
  - Difference is that VAT is collected in stages, RST only at final sale



# RST vs VAT

- They can differ in other circumstances
- Big issue with HST in BC was that it had broader tax base than PST
- Can also sometimes lead to tax cascading
  - If tax is charged on some inputs



# Tax Bases

- Unlike the HST, the tax base for PST varies from province to province
- Prepared meals
  - Taxed in MB, SK, QC
  - Not taxed in BC
- Children's clothing
  - Taxed in SK, QC
  - Not taxed in BC, MB
- All provinces exempt most food
- No economic reason for exemptions; purely political



# Tax Rates

**TABLE I9.3 Provincial Consumption Tax Rates and Revenues (2020–21)**

| Region | RST Rate or Provincial Portion of HST (%) | RST/HST per Capita Revenue (\$) | Tax Rate on Cigarettes (\$/carton) | Tax Rate on Gasoline (¢/litre) | Consumption Tax Revenue (\$ millions) | Consumption Tax Share of Own-Source Revenue (%) |
|--------|---|---------------------------------|------------------------------------|--------------------------------|---------------------------------------|---|
| NL     | 10  | \$2,139                         | 59.00                              | 14.5                           | \$ 1,752                              | 26.6  |
| PE     | 10  | 1,962                           | 55.04                              | 8.47                           | 460                                   | 19.6  |
| NS     | 10  | 1,874                           | 59.04                              | 15.5                           | 2,864                                 | 23.6  |
| NB     | 10  | 1,809                           | 51.04                              | 10.87                          | 2,188                                 | 20.7  |
| QC     | 9.975                                     | 1,936                           | 29.80                              | 19.2                           | 24,663                                | 18.1  |
| ON     | 8   | 1,917                           | 36.95                              | 14.7                           | 36,627                                | 23.6  |
| MB     | 7   | 1,578                           | 60.00                              | 14.0                           | 3,387                                 | 19.8  |
| SK     | 6   | 1,913                           | 54.00                              | 15.0                           | 3,685                                 | 24.1  |
| AB     | -   | -                               | 55.00                              | 13.0                           | 4,429                                 | 9.6   |
| BC     | 7   | 1,475                           | 59.00                              | 14.5–27*                       | 12,008                                | 20.5  |
| NT     | -   | -                               | 60.80                              | 6.4–10.7*                      | 69                                    | 2.8   |
| NU     | -   | -                               | 60.00                              | 6.4                            | 55                                    | 2.2   |
| YT     | -   | -                               | 62.00                              | 6.2                            | 41                                    | 2.6   |

\*Note: Reflects range in tax rates across different localities.

Sources: Natural Resources Canada, Fuel Consumption Levies in Canada, <https://www.nrcan.gc.ca/our-natural-resources/domestic-and-international-markets/transportation-fuel-prices/fuel-consumption-taxes-canada/18885>; Finances of the Nation, Government Revenue and Expenditure Database, <https://financesofthenation.ca/real-fedprov/>.



# Excise Taxes and Custom Duties



# Excise Taxes

- Excise taxes are specific taxes levied on particular goods
- Levied by the federal government and all provinces
- Items listed on next slide
- Reasons for excise taxes
  - Raise revenue
  - Discourage consumption of harmful goods (e.g., tobacco, alcohol)
  - Correct for externalities (e.g., gasoline, smoking)
  - Sin taxes



# Excise Taxes

TABLE 19.4

Selected Rates for Federal Excise Taxes and Duties, 2022

|                           |   |
|---------------------------|---|
| Gasoline                  | 10.0¢/litre                               |
| Diesel and aviation fuel  | 4.0¢/litre                                |
| Cigarettes                | 74.47¢/5 cigarettes                       |
| Manufactured tobacco      | \$186.18/kg                               |
| Cigars                    | \$32.42/1,000 cigars                      |
| Tobacco sticks            | 14.89¢/stick                              |
| Cannabis (combined rate)* | Greater of \$1/gram or 10% of sales price |
| Wines:                    |   |
| Alcohol, 1.2% or less     | 2.2¢/litre                                |
| Alcohol, 1.2% to 7%       | 33.0¢/litre                               |
| Alcohol, over 7%          | 68.8¢/litre                               |
| Distilled spirits         | \$13.042/litre of alcohol                 |
| Beer:                     |   |
| Up to 1.2% alcohol        | \$2.89/hectolitre                         |
| 1.2% to 2.5% alcohol      | \$17.41/hectolitre                        |
| Over 2.5% alcohol         | \$34.82/hectolitre                        |

\*Revenue from cannabis excise taxes is shared between the federal, provincial, and territorial governments, with the federal government receiving 25 percent of revenues to a maximum of \$100 million per year.

Source: Government of Canada, "Excise Taxes and Duties, and Other Levies," <https://www.canada.ca/en/services/taxes/excise-taxes-duties-and-levies.html>.

<sup>22</sup> In Table 19.4, federal excise taxes apply to domestic and foreign goods sold in Canada. Excise duties apply only to domestically produced goods. However, customs duties on imports exceed the excise duty exemption on imports.



# Custom Duties

- Custom duties (tariffs) are taxes on imported goods
- In the past they were an important source of revenue
  - Not so much today
  - Lots of trade agreements in place that limit tariffs
- Main point of tariffs is to protect domestic industries
  - E.g., steel, dairy, poultry
  - Can lead to trade wars



# Personal Consumption Taxes

# Introduction

- Today sales taxes are levied on businesses
  - Tax is usually added on at checkout
  - But businesses remit to the government
  - The statutory incidence is on business
- Another option would be to levy the tax directly on individuals
  - Individuals would pay tax directly to government
  - Would file a tax return for consumption
- Some argue that it would be better
  - Makes it easier to take personal circumstances into account



# Personal Consumption Tax

- Under this system, people file a tax based on consumption
- Based only on what is consumed
  - Excludes saving (income not consumed)
- How would this work?
- A person's consumption is equivalent to their income minus their change in wealth
  - To compute consumption, add income and subtract changes in wealth
  - Equivalently, add income and subtract anything not consumed
- Like income taxes, there can be deductions and credits
  - E.g., charitable donations, medical expenses



# Personal Consumption Tax

**TABLE 19.5** Calculating a Personal Consumption Tax

Include:

- Wages, salaries, interest, dividends, rent, profits, royalties, transfer payments, and other income (excluding capital gains)
- Proceeds from the sale of real and financial assets
- Proceeds from borrowing
- Gifts and bequests
- Withdrawals from savings accounts and other investments

Deduct:

- Cost of real and financial assets purchased
- Capital contributed to partnerships or proprietorships
- Repayment of interest and principal on borrowed funds
- Deposits into savings accounts and other investments
- Other permitted deductions, such as extraordinary medical expenses, as might also be provided under an income tax

Equals:

- Tax base

$$\text{Tax base} \times \text{applicable tax rates} = \text{tax liability}$$



# Hall-Rabushka Flax Tax

- Hall-Rabushka proposed one (complicated) flat consumption tax
- Works by taxing businesses and individual compensation
- Businesses
  - Pay tax on sales minus purchases from other businesses
  - Also subtract payments to workers
- Individuals
  - Pay tax on wages and salaries minus personal savings
  - Also subtract investment income (dividends, interest)
- Flat tax rate applied to each tax base



# Hall-Rabushka Flax Tax

- Equivalent to a consumption tax levied on businesses
  - When consumption tax levied on business, it pays tax on sales minus purchases
  - Wages are embedded in prices, so they are implicitly taxed
  - With Hall-Rabushka, wages are instead taxed directly at individual level
- Only difference is point of collection of certain taxes
- There is no system currently in place that does this



# Administration Issues

- Not feasible if people had to add up all expenditures
- But can work if we impute consumption by income minus saving
  - Would require tracking of savings
  - Can be done by bank accounts
  - Potentially problematic for people who save outside of banks



# Administration Issues

- Some types of consumption are hard to tax
  - Consumption benefits generated by things like housing
  - E.g., owner-occupied housing
- How would we tax this?
- One option: tax prepayment
  - Tax the house (or car, or other durable) at the point of purchase
  - The value of the durable today is the present value of future consumption services (imputed rent)
  - The tax charged now should equal to the taxes charged on consumption benefits



# Benefits of Personal Consumption Tax

- Avoid issues of capital gains and depreciation
  - Only consumption is taxed
  - So no need to track capital gains
- Less investment lock-in
  - With income tax, investors may hold onto assets to avoid capital gains tax
  - With consumption tax, can sell and reinvest without tax consequences
- Removes need for separate personal and corporate tax



# Summary



# Summary

- Consumption taxes are an important source of government revenue
- Value added taxes (e.g., GST, HST) are the most common form of consumption tax globally
- Retail sales taxes are simpler but can lead to tax cascading
- Excise taxes and custom duties are other forms of consumption taxes
- Consumption taxes are often more efficient than income taxes
- Personal consumption taxes are an alternative way to tax consumption directly



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