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Developing statistics required for the provincial allocation of a harmonized GST collection

A proposal by Statistics Canada

1. Introduction

The GST

If the Federal GST is "harmonized" with one or more provincial sales taxes with the result of a single tax collection, it will be necessary to allocate the amount collected among the Federal government and participating provinces.

In some ways the GST is less complicated than it seems. But in other ways it is more complicated. For example, the tax is structured as a value-added tax applied at every stage of the production chain where goods and services are sold but there is no tax as the product moves from level to level so that in the end the effect is identical to a simple sales tax on the value of final output. To that extent it is simple.

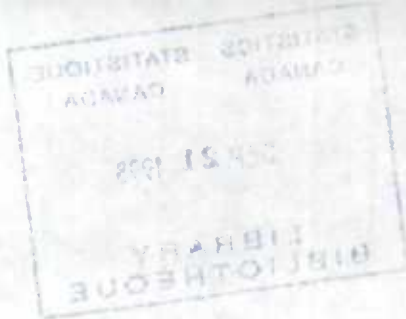
The largest category of GST-liable goods and services includes all those supplies for which a business collects from its customers the full amount of the tax rate multiplied by the sale price of the product.¹ The tax collected is remitted to the government less any taxes paid by the seller on the purchase of goods and services used in its commercial activities.² There are two main exceptions to this principle.

The first of the two exceptions consists of all those goods and services which are "zero-rated". Zero rating means that the goods and services purchased are taxable at the rate of 0 per cent. Registered suppliers of zero rated goods and services are entitled to a full tax credit on the inputs used in the production of those goods and services.

The second exception consists of all those supplies which are tax "exempt". In this case, no tax is added to the sale price, but no input tax credit may be claimed. The producers of exempt goods and services are, in effect, equivalent to "final customers"

¹ Technically, the tax is payable by the purchaser, but registered businesses collect the tax from their customers as agents of the government.

² If the input tax credit is greater than the tax collected on sales, the business is entitled to a refund of the difference.



of GST taxable goods and services.

For purposes of this note, "final purchase " means the purchase of a good or service on which GST is paid but on which no subsequent GST refund is allowed

Proposal: methods

This proposal is based on the assumption that the combined tax will have the basic properties of the GST and that the distribution of tax will be according to the point of final purchase, that is, the geographic location where the good and service is finally consumed and not for the processing of another commodity.

Estimating the value of final sales can take place on the basis of the demand or the supply side of the market. The demand side consists of all final consumers of goods and services; while the supply side consists of all those who sell goods and services to final consumers. Estimating from the supply side can be done on the basis of two methods: one method involves "tracking" through the tax process itself; the other uses statistics derived from business surveys and administrative records. From the demand side there is only one method: that of surveying the purchases by the final consumers. But there is a fourth method which Statistics Canada finds the most robust and reliable: to use both supply and demand information so as to produce a combined estimate of the value of final sales and associated taxes.

From a pure tax collection point of view, detailed tracking from the supply side might well be the more natural way to allocate a harmonized GST. However, a prudent stance relative to the paperwork imposed on suppliers and the extra costs of the required record-keeping make this solution unacceptable. Indeed, sellers would be required to determine whether their customers were final, intermediate buyers, or exempt suppliers as well as the province in which the purchaser was resident. While this is possible in theory, in practice it would be exceedingly onerous for business to comply with.

Neither much improved business surveys nor a greatly expanded Family Expenditure Survey (FAMEX) which is Statistics Canada's standard instrument to record household consumption expenditures are by themselves capable of providing enough accuracy to do the job on their own. FAMEX is a very expensive and burdensome survey. It requires four hours per average interview. To complicate it further so as to get the necessary detail would strain beyond tolerance both the capacity of the interviewer and the interviewee. Moreover, the ability of respondents to recall the purchases in the fine detail required and with the necessary degree of precision without maintaining an extensive diary is simply not feasible.

Given these limitations, the most robust results will be provided by a combination of much improved business surveys and an improved FAMEX plus information that might

be derived from the judicious use of administrative records. Moreover, the Statistics Canada proposal envisages the simultaneous assessment of each separate piece of information against all available data in the framework of a very detailed set of accounting entries - the provincial input-output tables. This is expected to result in stable and accurate estimation of the value of final sales of goods and services, indeed in the best such estimation possible with existing methodologies.

Properties of method proposed

Input-output tables are based on a set of identities, of which the ones that matter most are:

- i) Aggregate supply must equal aggregate demand.
- ii) Goods and services produced by any given industry are fully distributed to other industries (including itself) as intermediate goods and services to either be processed further or else to satisfy final demand.
- iii) The price tag on every good or service is made up of some form of income for all of those involved in its production. In aggregate, this says that Gross Domestic Product, (the sum of all incomes, wages and salaries, profits including depreciation, investment income, rent and indirect taxes including GST and PST), equals Gross Domestic Expenditure (the sum of personal consumption, government current expenditure, business and government investment in fixed capital, inventories, and exports less imports).

The input-output system is therefore both complete and exhaustive, two essential qualities for a reliable tax allocation method. Incoming data are fed into the system and examined for inconsistencies within the identities explained above. Detected inconsistencies lead to a re-evaluation of the basic data series and iterative adjustments are made to the input-output tables until all the inconsistencies are removed. Remaining errors in the final set of estimates may arise from two sources: errors in the underlying data that do not violate the accounting identities and errors of judgement by the experts who compile the tables and adjust for inconsistencies. The method ensures that with good underlying data the second source of error is minimized.

Statistics Canada is satisfied that so long as the fourth method is adopted and so long as basic data sources are substantially and uniformly improved across all provinces and territories, the collection of a harmonized GST can be allocated among the participating governments with acceptable accuracy, freedom from significant revision, at an acceptable cost, and within what can be requested from business and households without creating serious problems of compliance.

The rest of this document reviews the data requirements that must be satisfied in order to support a set of provincial economic accounts from which it is possible to extract an accurate measurement of the non-deductible GST paid by each of the four categories of final consumers. Their shares in total GST collected are displayed in the table below:

Table 1

	non-deductible GST
Consumers (goods and services)	73%
Buyers of Residential Construction	15%
Producers of Exempt Commodities (Business Sector)	8%
Public Sector Bodies	4%

The proposal assumes the production of reliable estimates with a two year lag and its total cost is spelled out in the last section of this note. The estimates rest on the assumption that the Statistics Canada collectors and compilers of the required data start out with the budget which is currently available to them i.e. prior to the budget cuts planned to be in effect as of 1998. The budgetary consequences of the cuts are specifically shown in the cost table of the last section of this report.

2. Consumers

Personal expenditures constitute the largest component of expenditure based GDP and are also the largest component of GST. The estimation of these expenditures with the right commodity detail (sufficient to permit disentangling the impact of exempt and zero rated commodities) and correctly assigned to the provinces where the expenditure took place is key to the success of this proposal.

Currently, provincial estimates of personal expenditure suffer from several shortcomings.

1. Suppliers of goods and services to consumers also sell to businesses and governments who are of course subject to a different tax treatment. Nonetheless information on category of customer is not collected currently.

2. Sales are not collected by category of good or service. Where such information is required it is imputed on the basis of related indicators or information collected in the past.

3. Information collected directly from consumers is only compiled at infrequent intervals and most often used as an allocator of more aggregated information collected currently.

Provincial estimates are of varying reliability. Expenditures for the smaller provinces are typically estimated with greater uncertainty.

The proposal's information requirements involve:

1. An annual measure of consumers' expenditure (FAMEX) with the right details on goods and services and reliable numbers for each province and territory.
2. A reliable measure of the expenditures of foreigners visiting Canada and of Canadians making purchases of goods and services away from home.
3. Reliable estimates of sales of goods and services sold by the distributive trades (wholesale and retail) with the right provincial and territorial breakdowns. In particular, reliable numbers are also required for direct sales (for example, sales by catalogue and from vending machines), sales of new and used motor vehicles, and sales of home fuel and gasoline to households. Together these sales account for almost half of consumers' expenditure.
4. Reliable and provincially detailed numbers on the sales of services to consumers including food and drink away from home, accommodation while on travel, amusement and recreation, the purchase of legal and accounting services, telecommunications, and urban transportation which account for the bulk of the other purchases by consumers with the exception of rent.

The incorporation of these requirements in the appropriate surveys and other associated data has been costed as shown in the last section of this note.

3. Buyers of Residential Construction

These expenditures are the second largest and are therefore to be subject to estimation with as much care and detail as expenditures on current goods and services. This is also a class of expenditures which is notoriously complex to estimate with the desired accuracy.

The requirements are to obtain comprehensive and reliable values of both property sales (on which the GST is charged and which include the land on which the structures are

erected) and of the value of work put in place which excludes land. The need to estimate both is to ensure that the data are confronted in the input-output framework and to ensure that the different GST treatment is properly reflected in the estimate of this component of "final consumption". The requirements also include information necessary to estimate reliably the fees charged by engineers and architects; and the inventory of houses erected but not sold.

The sales of new properties are not the sole contributors to taxable expenditures under the rubric of new housing. **Alterations and improvements** on residential construction by homeowners and by landlords are both important (as much as the value of new housing) and growing fast. While some data sources exist to provide data on these expenditures it is required that they be substantially altered in order to provide more reliable basic information valued at the level of the province or territory.

The GST related to **real estate commissions** represents one third of the value of the GST on residential housing. But there is no reliable current information on these commissions even at the national level, let alone reliable values for commissions received in each of the provinces and territories. The requirement is to gather sufficient basic data to estimate reliably real estate commissions net of discounts, by province and with the necessary discrimination to separate commercial from residential sales.

Finally there is a requirement to estimate other transfer costs such as the cost of property assessment, building inspections, etc.

The cost of satisfying those requirements is included in the last section of this report.

4. Producers of Exempt Commodities - the business sector

Suppliers of services produced by such activities as finance, insurance, residential rent, medical care and the like, pay GST on their inputs but cannot claim any input tax credit since what they produce is exempt. They are the "final consumers" of GST taxable commodities. The following are data requirements:

1. Complete treatment of head office to assess the value of services provided by them to branches in order to determine the proportion of activity that effectively takes place in every province so that the consumption of taxable inputs can be properly allocated.
2. Improved commodity content and geographical expansion for the Finance and Insurance industries.
3. Accurate provincial allocation of investment in machinery and equipment.

These requirements have been costed and are included in the last section of this report.

5. Public Sector Bodies

For the sake of the robust dual estimation procedure described in section 1 above, the Provincial economic accounts must include the transactions of public sector bodies notwithstanding the treatment of this sector proposed by the Department of Finance in the context of the harmonisation initiative. It is required to develop better information on public sector revenues and expenditures through a more intensive use of the administrative records kept by municipalities, hospitals, school boards, and urban transit commissions.

These requirements have been costed and are included in the last section of this report.

6. Necessary overhaul of business statistics infra-structure

Most of the requirements listed above will be satisfied by conducting more comprehensive and more detailed annual business surveys. Their precise nature remains to be specified but no matter what form it takes, surveys and other forms of data collection will be based on a universal list of all registered businesses operating in Canada, identified, located, and classified according to their main economic activity. That list is part of the essential infra-structure which Statistics Canada uses to conduct its business surveys and other contacts with business.

Currently, the list - or business register - is based on all registered employers and is driven by employers' payroll deduction accounts opened with Revenue Canada. It includes approximately one million units, complete with their name, address, size code and industrial activity. For purposes of the tax harmonisation exercise, the business registers will have to include all units registered with Revenue Canada as suppliers of goods and services (GST accounts) irrespective of their status as employers. The approximate number of such units is two million.

In order to increase the reliability of the estimates the register will have to comply with a new standard of up-to-dateness and accuracy of classification. Such a standard can only be attained by keeping track of each business to ascertain whether its last known status is unchanged. Typically, the smaller the business the more volatile its status.

The business register is also the key instrument to identify businesses in those industries for which very little information has been collected so far but which must be contacted to provide basic information. Together those industries are estimated to account for sales of the order of 50 billion dollars. They are:

- business management consultants
- values of services required by agriculture, forestry, mining, manufacturing, energy, construction and transportation industries
- couriers
- fishing, fish farming, and Northern produce
- operators of water transport

The requirements to enlarge the Business Register, subject it to a stricter standard of accuracy and survey the missing activities have been costed and are included in the last section of this report.

7. Other requirements

The way to audit the collected data is to confront them systematically using the right framework for doing so. That requires the completeness of the system. In order to ensure that it is complete there are additional requirements that are specified below and have been costed in the last section of this note. They are:

- intermediate inputs and gross domestic product of the construction industries by province;
- expenditures and revenues of construction and land developers;
- highway and engineering works produced on own-account; and
- inter-provincial trade flows of both goods and services -regularly measured.

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