# Taxation Made Easy: A Cost-Benefit Analysis of Prefilled Sales Tax Returns

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### **Working Paper**

#### **ABSTRACT**

Small and medium-sized enterprises incur disproportionately high compliance costs under the current Goods and Services Tax/Harmonized Sales Tax (GST/HST) reporting system. To reduce these costs, some EU and Latin American countries have successfully adopted prefilled tax return systems supported by national e-invoicing infrastructures. Canada has not yet adopted this innovation. This study estimates the economic welfare improvement that would result if Canada were to implement a system of prefilled GST/HST returns. An integrated financial, economic, and stakeholder cost-benefit analysis is used. Implementation of a prefilled GST/HST return system in Canada is estimated to generate a present value of compliance cost savings over 10 years for GST-/HST-registered businesses of CAD 14.3 billion. Over 99% of these savings would accrue to over 3.7 million medium, small, and self-employed businesses. After netting out the costs of implementing this intervention, the economic welfare improvement for the economy would be CAD 13.6 billion. The additional income taxes collected due to the reduction in business costs have a positive budgetary impact on both the federal and provincial governments. Hence, after deducting estimated costs, the government's net gain would be CAD 2.6 billion. The net after-tax gain by Canadian businesses would be approximately CAD 11 billion.

**Keywords:** Prefilling GST/HST Return, Digitalization of Tax System, E-invoicing, Compliance Cost of GST/HST in Canada, SMEs, GST/HST filers, Goods and Services Tax/Harmonized Sales Tax Filers by Jurisdiction.

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## Introduction

Small and medium-sized enterprises (SMEs) in Canada, especially newer companies, face notable administrative challenges in complying with Goods and Services Tax/Harmonized Sales Tax (GST/HST) obligations. Beginning with reporting periods in 2024, the Canada Revenue Agency (CRA) has mandated electronic filing for nearly all GST/HST registrants, with exceptions for charities and selected listed financial institutions (Canada Revenue Agency, 2024a). Annual filers with a net tax of CAD 3,000 or more for the previous year are also required to make quarterly instalment payments, which adds to the administrative workload for smaller businesses (Canada Revenue Agency, 2024a).

However, GST/HST returns continue to rely on manual data entry and reconciliation, requiring businesses to input sales, tax, and credit details directly into their returns rather than through automated invoice data integration (Canada Revenue Agency, 2021a). Although digital invoicing frameworks have been implemented internationally, Canada currently lacks a real-time e-invoicing system that could enable prefilled returns or automatic data exchange between business invoices and tax submissions (Canada Revenue Agency, 2021b; Rocha, 2022). This manual process increases the potential for clerical errors and adds to compliance complexity, particularly for SMEs with limited inhouse accounting resources.

Empirical evidence suggests that smaller firms bear disproportionately higher compliance costs relative to larger corporations owing to their limited administrative capacity and higher per-transaction reporting expenses (Fraser Institute, 2019). Introducing real-time e-invoicing could therefore improve accuracy, streamline administrative processes, and reduce compliance burdens for Canadian SMEs (Rocha, 2022).

SMEs, which represent 99% of all businesses in Canada, often lack the internal resources to manage the complexities of GST/HST compliance and, as a result, face disproportionately higher regulatory burdens (Canadian Federation of Independent Business, 2025). According to surveys conducted by firms in the Organization for Economic Co-operation and Development (OECD) and the EU, per-firm compliance costs relative to turnover or value-added tax (VAT) collected are significantly higher for small and micro enterprises than for larger firms (OECD, 2015; European Commission, 2018). This burden could be significantly reduced by implementing a more effective system, such as a prefilled GST/HST return system based on the tax administration utilizing electronic invoicing data. By automating tax reporting, such a model could streamline compliance for SMEs and improve the overall effectiveness of Canada's system for GST/HST tax administration.

Countries such as Chile, Estonia, and Italy have successfully implemented automated VAT return systems supported by national e-invoicing infrastructures, resulting in notable improvements in tax compliance and administrative efficiency (Rocha, 2022; OECD, 2022a). In contrast, Canada has not yet adopted a comparable approach. Despite the global momentum toward automating VAT returns, academic and policy literature on the subject for Canada remains limited. This lack of research presents a significant gap, particularly as other jurisdictions increasingly demonstrate the feasibility and net benefits of such innovations.

To address this gap, this paper conducts a cost-benefit analysis to estimate the potential financial and economic benefits of implementing a prefilled GST/HST return system in Canada. As electronic invoicing is being adopted at a rapid pace around the world and is almost comprehensive across Latin America (Barreix & Zambrano, 2018), we undertake this analysis on the assumption that e-invoicing infrastructure will eventually be in place in Canada, enabling the implementation of prefilled GST/HST. The analysis evaluates the expected compliance cost savings for businesses by size. It also evaluates the budgetary implications for the tax administrations, including the CRA and Revenu Québec (RQ), as well as the federal and provincial-territorial governments of Canada. The goal is to provide an evidence-based foundation for considering the policy and economic viability of automated tax return systems in Canada.

This paper has three main contributions. First, it provides a literature review of Canada's current e-invoicing and GST/HST reporting landscape, setting the stage for assessing prefilling initiatives. Second, it presents a cost-benefit analysis to evaluate potential savings from compliance and the administrative costs associated with implementing a prefilling model. Third, it estimates the additional revenue that the governments of Canada will receive due to the increase in the income tax base brought about by lower compliance costs. These contributions aim to inform future tax policy reforms and highlight practical, data-driven insights based on international experience, specifically tailored to Canada's fiscal landscape.

## Literature review

Research on VAT/GST compliance and administrative costs indicates that Canada's burdens are substantial and broadly comparable with those in other advanced economies. However, direct quantitative cross-country comparisons remain limited. Historically, in Canada, GST compliance costs were estimated at USD 9.6 billion in 1991 (Cléroux, 1992). More recent Canada-wide figures for all taxes place total compliance costs in 2011 at

USD 19.2–24.8 billion, with administrative (government) costs around USD 6.6 billion (Ariganello et al., 2013). Studies consistently find a regressive pattern, with small businesses bearing higher proportional burdens (Evans et al., 2014; Smulders & Evans, 2017; Bain et al., 2015). International evidence suggests that this pattern is not unique to Canada; in some jurisdictions, compliance costs have been documented at above 5% of VAT revenue and at 1.50–1.55 times the total tax administration budget (Berhan & Jenkins, 2005). Qualitative comparisons likewise indicate that Canada's experience tracks that of other developed countries, with one cross-country study describing "remarkably similar outcomes" across Canada, Australia, South Africa, and the United Kingdom (Evans et al., 2014). However, the literature highlights gaps in direct quantitative international comparisons, limiting precise ranking of Canada's VAT/GST compliance and administrative-cost efficiency relative to its peers (Highfield et al., 2019; Zu et al., 2020).

To reduce the tax burden on businesses, the modernization of tax administration through digital tools has drawn growing interest from scholars, international organizations, and tax authorities. The literature frequently highlights the potential of e-invoicing, real-time (or near-real-time) data reporting, and prefilled returns to enhance tax collection efficiency, reduce opportunities for fraud, and strengthen taxpayer compliance (Kotsogiannis et al., 2025; Bellon et al., 2022).

One useful analogy is that of a credit card billing system in which all transactions are automatically recorded and posted, and the cardholder receives a ready-made statement summarizing activity, eliminating much manual reconciliation. In a digitally enabled tax regime, invoice data (or third-party transaction data) could be streamed to the tax authority to generate draft returns for taxpayer review rather than forcing businesses to compile everything manually. This kind of automation promises more accurate reporting, a lower administrative burden, and a shift from reactive enforcement toward proactive taxpayer support. However, actual implementations will vary in their degree of real-time integration, audit oversight, and system maturity (OECD, 2025; Martínez-Vázquez et al., 2022).

Countries such as Italy, Chile, and Estonia provide instructive examples of how digitalization can transform VAT administration through e-invoicing and prefilled return systems. In Italy, the Exchange System (In Italian: Sistema di Interscambio or SdI) serves as the central platform for validating and exchanging all electronic invoices between businesses and the tax authority, enabling data-driven monitoring and forming the basis for partially prefilled VAT returns for eligible businesses (Agenzia delle Entrate, 2022; European Commission, 2019; Mazereel & Hermans, 2025). Systematic evidence on fraud reduction is still emerging. However, the Italian experience shows that automation can reduce administrative effort and enhance audit traceability. Italy's adoption of mandatory e-invoicing through the SdI in 2019

has produced measurable compliance gains. Using cross-border trade data, Heinemann and Stiller (2025) estimate that the reform reduced cross-border VAT fraud by EUR 2.2 billion to EUR 2.6 billion between 2018 and 2019, aligning with Italian government revenue estimates of similar magnitude.

These outcomes are supported by assessments from the European Commission and OECD, which highlight how Italy's digital reporting infrastructure facilitates prefilled VAT returns and enhances administrative efficiency, particularly for SMEs (OECD, 2025; European Commission, 2020a, 2020b). Although anecdotal reports suggest that automation has shortened filing times for small businesses, systematic evidence on compliance cost reductions remains limited.

In Chile, the Servicio de Impuestos Internos (SII) mandates the issuance and clearance of Documentos Tributarios Electrónicos (DTEs) for most taxpayers. Firms must submit invoices electronically to the SII for validation before delivery, enabling near-real-time transaction monitoring. This system enhances VAT compliance and supports the automation of VAT reporting through prefilled monthly returns (Formulario 29) based on DTE data (Servicio de Impuestos Internos (SII), 2025; OECD, 2022a). Estonia, often cited for its advanced digital infrastructure, integrates business, accounting, and tax data through interoperable national systems, allowing most businesses to submit returns rapidly with minimal manual input (Kalvet, 2012; OECD, 2022c).

Across these cases, the literature identifies cost reduction as a central benefit of tax digitalization achieved through automation, streamlined data flows, and the reduction of intermediaries (OECD, 2025). The same logic underpins proposed GST/HST prefilling initiatives in Canada, where automating return preparation could substantially reduce compliance costs and enhance reporting accuracy.

## Digital transformation and public finance

Digitalization has recently emerged as a central driver of public sector reform, prompting governments worldwide to modernize service delivery, data management, and revenue collection. Growing public expectations for efficient, transparent, and user-friendly governance have accelerated the adoption of digital technologies across the public sector (OECD, 2020a; World Bank, 2022). Within this context, tax administrations are increasingly embracing digital transformation to streamline administrative processes, enhance compliance, and strengthen trust between businesses and authorities (OECD, 2022a).

A central pillar of this transformation is the digitalization of tax systems, which reduces manual data handling, lowers administrative costs, and improves taxpayer services through automation and analytics (Martínez-Vázquez et al., 2022; OECD, 2025). Among the most significant innovations is the development of prefilled tax returns, including prefilled GST/HST declarations, which leverage real-time transaction data to simplify compliance obligations for businesses of all sizes and enhance overall filing accuracy (Rocha, 2022; OECD, 2022b).

The OECD (2020b, 2020c) underscores that digital transformation in tax administration is not merely a technical upgrade but a strategic shift that redefines the relationship between the taxpayer and the state. Digital tools can reduce administrative burdens, increase accuracy in reporting, and promote voluntary compliance. Similarly, the United Nations Conference on Trade and Development (UNCTAD) (2020) emphasizes the importance of integrating digital tax systems into a comprehensive digital economy strategy. Bellon et al. (2022) find that after the mandatory adoption of e-invoicing, firms in Peru significantly increased their reported VAT liabilities, suggesting that digitalization reduces compliance costs and improves reporting.

Automation and the integration of digital records have transformed the analytical and enforcement capacities of modern tax administrations. Empirical and comparative research demonstrates that digital infrastructures enable risk-based auditing, reduce manual reporting errors, and improve the allocation of enforcement resources (Okunogbe & Santoro, 2023; Martínez-Vázquez et al., 2022; OECD, 2025). When supported by robust legal frameworks and interoperable information systems, automation facilitates the use of predictive analytics and real-time compliance monitoring, enabling tax authorities to shift from reactive enforcement to proactive, data-driven compliance management (Gupta et al., 2017; Nose & Mengistu, 2023).

However, the degree to which automation can be realized is shaped by institutional and legal complexity. For example, the intricate nature of the US tax code and data-sharing rules poses significant obstacles to the adoption of prefilled returns (Guenther, 2022), illustrating that even technologically advanced jurisdictions face barriers to full automation when statutory and administrative systems remain fragmented.

## The role of e-invoicing in tax compliance

Among the most transformative instruments of tax digitalization is e-invoicing. E-invoicing systems enable the real-time exchange of structured transactional data between businesses and tax authorities, forming the technological foundation for more efficient,

accurate, and transparent tax administration (Akagi, 2024; Bellon et al., 2022; Caluwaerts, 2010; OECD, 2022b). When embedded within broader digital tax infrastructures, e-invoicing automates the purchase-to-pay cycle, enhances auditability, and reduces compliance burdens by minimizing manual data entry and reconciliation (IMF, 2023).

Empirical evidence from OECD and IMF studies demonstrates that digital reporting and e-invoicing reforms not only improve VAT compliance and revenue collection but also enable the automatic generation of prefilled returns for VAT or GST/HST systems (Bellon et al., 2022; OECD, 2025). Furthermore, e-invoice data contribute to the development of the real-time economy, allowing governments to monitor transactions as they occur, strengthen anti-fraud mechanisms, and improve the timeliness and granularity of national accounts (Akagi, 2024). Collectively, these benefits position e-invoicing as a cornerstone of modern, data-driven tax administration that advances both administrative efficiency and fiscal transparency.

Empirical evidence increasingly supports the fiscal benefits of mandatory e-invoicing. In Latin America, Bellon et al. (2022) conducted a quasi-experimental study in Peru showing that the introduction of mandatory VAT e-invoicing increased reported sales, purchases, and VAT liabilities by roughly 5% in the first year, mainly by improving transaction-level data accuracy and reducing under-reporting. Their findings indicate that e-invoicing, when combined with nationwide digital integration, can meaningfully narrow the VAT compliance gap.

## Prefilled returns: efficiency and equity

The OECD (2022a) documents multiple country experiences with prefilled tax return systems, noting that they reduce administrative burdens, minimize manual data entry, and lower error rates for both businesses and tax administrations. In its *Towards Seamless Taxation* report, the OECD (2022b) further highlights that automated data sharing and prefilling capabilities enable businesses to spend less time on routine reporting while improving data accuracy and compliance outcomes.

A leading example is Estonia, where the national *E-Tax* platform pre-fills individual income tax returns using data automatically transmitted by employers, banks, and government databases. According to the European Commission (2019), most businesses can review and submit their prefilled income tax returns in under five minutes, reflecting Estonia's high degree of digital integration. Although these figures refer to personal income tax, not VAT, they demonstrate the efficiency gains possible when real-time data interoperability is achieved across systems.

International evidence shows that digital tax administration, especially e-invoicing and prefilling, reduces routine workload and errors and can shift effort away from audits toward risk-based controls (IMF, 2023; OECD, 2022b). In contrast, the European Commission's (2022) assessment of SME tax compliance costs finds that in jurisdictions without such integration, VAT obligations remain a major source of administrative burden across EU member states, underscoring the potential of prefilled and real-time reporting systems to simplify compliance.

In Canada, public documentation and comparative OECD reporting indicate that the GST/HST system still relies on periodic (non-real-time) reporting, which constrains the CRA's ability to offer automated or prefilled GST/HST returns (OECD, 2022a; Rocha, 2022). While there is no single official Canada-wide estimate devoted solely to GST/HST compliance cost, adjacent indicators underscore the burden that periodic, manual steps create: in jurisdictions without integrated real-time VAT data, the post-filing VAT refund stage alone can require substantial time—an average of 18.2 hours to prepare and submit a refund claim and weeks to obtain the refund—highlighting the administrative drag where automation is limited (World Bank & PwC, 2019). Recent CRA-commissioned research on GST/HST filing focuses on behaviours and process pain points rather than direct compliance costs. However, it reinforces that frictions persist and that simplification/digitalization are active priorities for the CRA (Canada Revenue Agency, 2024a). Together, these sources support the policy case that implementing real-time data collection and prefilled GST/HST returns would reduce the compliance burden for Canadian businesses, particularly SMEs (OECD, 2022a; IMF, 2023; Rocha, 2022).

The Government of Canada (2025) has highlighted that public organizations continue to rely on outdated digital infrastructure, which can hinder integration and innovation in services. Meanwhile, OECD comparative reports (2020c, 2022a) show that, unlike leading jurisdictions such as Italy and Estonia, the CRA does not currently integrate real-time transactional invoice data into GST/HST reporting systems. This limits the CRA's ability to offer automated or prefilled tax return services, placing higher compliance burdens on businesses—especially SMEs.

# Objective of the Study: Cost-Benefit Analysis of Prefilled GST/HST Returns

This study conducts a cost-benefit analysis of implementing prefilled GST/HST returns in Canada, assuming the successful establishment of e-invoicing nationwide. By analyzing the impacts of prefilled returns on businesses of various sizes—non-employee, small, medium,

and large—this study seeks to quantify the benefits of reducing compliance costs for businesses and improving tax efficiency for the CRA.

For SMEs, prefilled GST/HST returns offer significant benefits. SMEs face the highest compliance costs relative to their sales or GST/HST revenues collected due to their limited resources for handling complex tax filing requirements (Vaillancourt et al., 2007; Vaillancourt & Barros, 2011; Clemens, 2008). Laurin and Dahir (2022) discuss the challenges of implementing automatic tax filing in Canada, emphasizing the complexity of the tax system.

Prefilled returns could reduce the administrative burden by automating data entry and alleviating the psychological costs imposed on small business owners associated with tax audits (Choi & Kleiman, 2024). Eliminating these costs will allow businesses to focus more on their core operations rather than on tax compliance tasks.

Large businesses, while better equipped to complete their tax filings, would still benefit from increased efficiency and fewer errors in reporting. For the CRA, prefilled returns would not only streamline the tax filing process but also contribute to cost savings in processing and handling returns. These savings could be redirected toward more strategic functions (Canada Revenue Agency, 2024a).

Furthermore, even if the GST/HST levels of taxpayer compliance do not change, reducing GST/HST compliance costs for businesses would lead to higher income tax revenue for the CRA. As businesses allocate fewer resources to administrative tasks, their taxable income will increase, resulting in higher income tax payments. Additionally, prefilled returns would likely increase compliance rates and reduce errors in tax filings, benefiting the overall economy (Statistics Canada, 2024).

The digitalization of Canada's tax system includes the adoption of electronic services and platforms to enhance the efficiency of tax administration. This transition aims to simplify interactions between businesses and the CRA while aligning with global trends in tax modernization (OECD, 2022b). The CRA's digital transformation initiatives underscore its commitment to modernizing tax administration in response to the demands of an increasingly digitalized economy (Canada Revenue Agency, 2024b).

## Methodology

The methodology is designed to evaluate the potential benefits and cost savings associated with integrating an administratively prefilled GST/HST tax return system within a framework characterized by the widespread adoption of e-invoicing.

The evaluation is conducted over 10 years utilizing a cost-benefit analysis framework, examining the results from both financial and economic perspectives. These two perspectives differ in focus:

- The financial perspective of a cost-benefit analysis highlights the direct financial costs and benefits related to a specific project or intervention. It determines whether the initiative will produce a net financial gain or loss for the involved parties, which can include administrative agencies and private companies. This view considers key elements such as implementation costs, operating expenses, and revenue, concentrating on how the intervention impacts net cash flow.
- The economic perspective adopts a broader approach by considering both the direct resource savings and costs associated with the intervention. This perspective evaluates the economic efficiency of the project through an analysis of its overall impact on resource allocation and societal economic welfare. Unlike financial benefits and costs, which reflect variations in cash flow, economic costs and benefits assess whether the intervention enhances or undermines societal welfare. Conducting an economic appraisal is essential to ensure that policy decisions prioritize the overall economic efficiency of tax mobilization rather than the financial interests of specific organizations.

This dual-perspective approach facilitates the quantification of the intervention's influence on principal stakeholders within the economy. The primary stakeholders encompass the government and Canadian enterprises. From the government's viewpoint, this includes the tax authority (TA), which is concerned with implementation costs, and the National Treasury, which assesses broader fiscal implications, including administrative expenses and projected changes in tax revenue. It regards savings in administrative and compliance costs as economic benefits, while any increases in staffing, technology, or infrastructure expenditures are deemed economic costs. The objective is to ascertain whether the initiative enhances or diminishes overall economic welfare. For instance, reductions in personnel and information technology (IT) expenses are considered economic benefits, whereas additional expenditure in these areas constitutes economic costs. An increase in government revenue is regarded as a financial benefit to the government but not as an economic benefit, as it signifies a transfer from businesses to the government.

#### Stakeholder considerations

We evaluate the benefits for both businesses and the federal and provincial governments. The main stakeholders are as follows:

- Businesses can be categorized into four distinct types, each playing a vital role in the economy: large, medium, small, and non-employee businesses.
- Tax administration for the GST/HST in Canada is primarily managed by the CRA, along
  with RQ. At the same time, the budgetary aspects of the government are the
  responsibility of the Department of Finance. This intervention will also impact the
  provincial government's revenues. In the following analysis, the impacts are quantified
  for each government entity and combined to form the total budgetary impacts.

From this analysis, the impact on the stakeholders in the economy can be quantified.

These relationships are described in the following set of equations:

**Reduction of business compliance costs:** Through the prefilling of the GST/HST tax returns, two components of compliance costs—data collection and preparation—will be eliminated. The proportion of compliance cost eliminated is denoted as  $\beta$ ; hence, the annual economic compliance cost savings  $(B_t^{iB})$  can be expressed as:

$$B_t^{iB} = (\beta)CC_t^i \tag{1}$$

Here, i indexes business size categories, where i=1 corresponds to non-employee businesses and i=4 represents large businesses. The summation aggregates outcomes across all business sizes and  $\mathcal{CC}_t^i$  is the corresponding annual GST/HST compliance cost prior to the introduction of prefilled returns.

The present value of benefits from compliance cost savings by each type of business over 10 years of prefilled tax implementation, discounted by the rate of r, is given in Equation 2.

$$PVB^{iB} = \sum_{t=1}^{10} B_t^{iB} \times (1+r)^{-t}$$
 (2)

The annual costs incurred by the business category to implement the prefilled tax are denoted by  $\mathcal{C}_t^i$ . These costs may include items such as computer service costs ( $\mathcal{CSC}_t^i$ ) and staff retraining costs ( $\mathcal{EC}_t^i$ ). These annual costs are expressed by Equation 3:

$$C_t^i = CSC_t^i + EC_t^i \tag{3}$$

The present value of the costs incurred by the businesses over 10 years to accommodate the prefilled tax system, denoted by  $PVC_{t=0}^{iB}$ , is described by Equation 4:

$$PVC^{iB} = \sum_{t=1}^{10} C_t^i \times (1+r)^{-t}$$
 (4)

The present value of the net benefits after deducting implementation costs for each business category, before tax,  $NPVB_{t=0}^{iB}$ , is described by Equation 5:

$$PVNB^{iB} = PVB^{iB} - PVC^{i} (5)$$

The additional provincial income tax revenue ( $PVPR^{ij}$ ) is estimated for the increased taxable income resulting from compliance savings in each province and territory, denoted as j. This estimation is carried out for a 10-year period after the implementation of the prefilled tax return. The values for the increase in provincial tax revenues are obtained by multiplying the present value of the net benefits by the applicable provincial income tax rate  $R^{Pi}$  for that business size, as described by Equation 6:

$$PVPR^{ij} = \sum_{i=1}^{4} \sum_{j=1}^{11} (PVNB^{iB} \times R^{Pi})$$
 (6)

Here, j indexes provinces, with j=1, ... 11 denoting each province in Canada. The summations over j aggregate the results across provinces and territories. The additional federal income tax revenue ( $PVFR^{ij}$ ) arising from increased taxable income due to compliance savings over 10 years is obtained by multiplying the present value of the net benefits by the business type by the applicable federal income tax rate  $R^{Fi}$ . This relationship is described by Equation 7:

$$PVFR^{ij} = \sum_{i=1}^{4} \sum_{j=1}^{11} (PVNB^{iB} \times R^{Fi})$$
 (7)

The present value of total revenue ( $PVTR^{ij}$ ) is estimated from the summation of additional federal income tax revenue and additional provincial income tax revenue over 10 years of implementation of prefilled tax returns and described by Equation 8:

$$PVTR^{ij} = PVFR^{ij} + PVPR^{ij} (8)$$

The net present value of financial net of tax benefits  $(NPVB^{ij})$  accruing to each business category is estimated by deducting the additional taxes  $(PVTR^{ij})$  that the businesses pay from the net benefits  $(NPVB^{ijB})$  of the decreased compliance cost due to prefilled tax returns over 10 years of implementation, as described in Equation 9:

$$NPVB^{ij} = NPVB^{ijB} - PVTR^{ij} (9)$$

The components of Equation 9 for each business category provide estimates of stakeholder impacts for each group. The value of  $NPVB^{ij}$  is the total stakeholder impact for businesses in Canada.

**Tax administration**: Financial costs incurred in year t,  $C_t^{FTA}$ , include initial costs,  $IC_t^{FTA}$ , and incremental operation costs,  $OC_t^{FTA}$ . In principle, the impact of this administrative innovation on operating costs could either increase or decrease the overall operating costs of tax administration. In undertaking this analysis, the assumption is made that there are no incremental tax administration cost savings from implementing a prefilled returns system. This is unlikely to be the case. However, this assumption introduces a downward bias in our estimate of total economic benefits to the Canadian economy.

The initial cost includes the personnel cost of the change management team,  $PC_t^{TA}$ , and training cost,  $TC_t^{TA}$ . The incremental operating cost includes the incremental computer services cost,  $CSC_t^{TA}$ , incremental software licence and maintenance cost,  $SC_t^{TA}$ , and additional personnel cost,  $APC_t^{TA}$ . This equation is given as Equation 10:

$$C_t^{FTA} = (PC_t^{TA} + TC_t^{TA}) + (CSC_t^{TA} + SC_t^{TA} + APC_t^{TA})$$
(10)

The present value of the net cash flow of the tax administration over 10 years of prefilled tax implementation is described by Equation 11:

$$PVC^{TA} = \sum_{t=0}^{10} C_t^{TA} \times (1+r)^{-t}$$
 (11)

**All governments:** The additional revenues collected by federal and provincial governments are an externality for the government entity resulting from the implementation of prefilled tax returns. These benefits are illustrated in Equation 8.

Net financial benefit for government entities occurs after deducting the present value of costs,  $PVC^{TA}$ , from the present value of total revenues they collected from businesses due to decreased compliance cost from prefilled tax return over 10 years of implementation, as described in Equation 12:

$$NPVB^{ijG} = PVTR^{ij} - PVC^{TA}$$
 (12)

With the methodological framework and equations established, our focus now turns to their application in the Canadian context of prefilled GST/HST returns. As international experiences demonstrate, the digitalization of tax systems has become a defining feature of modern public administration, offering significant gains in efficiency, transparency, and compliance. Against this backdrop, Canada represents a valuable case through which to assess how theoretical models can be operationalized and how prefilled returns might be effectively implemented. This application not only quantifies the potential costs and benefits but also provides policymakers with evidence on how delays in adoption could generate financial losses and risk positioning Canada behind other advanced jurisdictions in the global movement toward digital tax innovation.

## Taxonomy of GST/HST tax filers in Canada

For the cost-benefit analysis, the first requirement is to have estimates of the number of businesses categorized by business size, namely, large, medium, small, and micro enterprises. Canadian GST/HST tax filers are classified by the province or territory in which they file their return; however, no public information is available on the classification of businesses by business size.

The number of GST/HST filers by provincial jurisdiction, as of the latest available version (2022), is obtained from the CRA's GST/HST Statistics Report, Table 1 (Canada Revenue Agency, 2024c). This information is presented in Table 1, column 6. In 2022, there were 3,717,580 GST/HST tax filers in the whole of Canada.

The distribution of the number of GST/HST businesses among the large, medium, and small categories with employees is based on the categories from Statistics Canada's 2022 reports, which show the number of businesses with employees in June 2022 (Statistics Canada, 2022), as shown in Table 1, columns 3, 4, and 5.

To estimate the number of non-employee businesses (self-employed) GST/HST tax filers, the total number of businesses in 2022 that have employees in each province and territory (small, medium, and large), as reported in Statistics Canada (2022), is subtracted from the total number of GST/HST filers in each jurisdiction for that year. The assumption is that all businesses with employees must also be GST/HST tax filers. The number of non-employee businesses for 2022 is reported in Table 1, column 2. The categories are defined by the number of employees, as mentioned above. Large businesses are those with more than 500 employees, while medium-sized businesses are those with 100 to 499 employees. Small businesses are those with 1 to 99 employees.

The striking result from these estimations is that 99% of all GST/HST tax filers fall into the small (35%) and non-employee (64%) categories. Due to the low threshold of CAD 30,000

for requiring a self-employed individual to register for GST/HST, the result is that over time, more than 64% of GST/HST tax filers are one-person businesses. Except for the provinces of Newfoundland and Labrador, New Brunswick, Nova Scotia, and Prince Edward Island, the number of non-employee tax filers is much larger than that of those classified as small businesses. This can be attributed to the industrial structure in these provinces. The large (0.1%) and medium (0.6%) businesses, while responsible for collecting a significant proportion of the GST/HST revenues, represent a small fraction of the entities required to file GST/HST returns.

The distribution of GST/HST taxpayer businesses in Canada is very similar to that of Chile, where 98% of all VAT taxpayers are either small or micro businesses (Jenkins et al., 2023). The reason small businesses account for such a large proportion of VAT filers in Chile is also due to the low turnover threshold for registering as a VAT taxpayer. In Chile, all businesses, regardless of size, are required to register as VAT taxpayers.

Table 1. Distribution of GST/HST businesses in 2022 by size classification

Province	Non-employee businesses	Small businesses (1–99)	Medium businesses (100–499)	Large businesse s 500+	Number of GST/HST filers
	2022	2022	2022	2022	2022
1	2	3	4	5	6
Newfoundland and Labrador	8,718	18,461	261	30	27,470
Prince Edward Island	9,030	6,631	101	8	15,770
Nova Scotia	33,442	31,035	550	73	65,100
New Brunswick	19,809	25,624	456	51	45,940
Quebec	423,454	268,393	5,196	707	697,750
Ontario	1,032,583	483,955	8,935	1,217	1,526,690
Manitoba	63,880	42,150	795	125	106,950
Saskatchewan	95,915	41,964	582	69	138,530
Alberta	324,386	169,375	2,871	348	496,980
British Columbia	337,854	208,817	3,037	332	550,040
Territories	2,868	4,078	89	5	7,040
Total Canada	2,391,259	1,300,483	22,873	2,965	3,717,580
Percentage	64.3%	35.0%	0.6%	0.1%	100.00%

## Compliance cost of GST/HST tax filers in Canada

The second key variable in conducting a cost-benefit analysis of a system of prefilling GST/HST returns is an estimate of the current compliance costs that businesses incur under the laws governing the collection of these taxes. It is fortunate that in 2016, Statistics Canada conducted a survey to estimate the average GST/HST compliance costs incurred by businesses of various sizes in Canada (The data from the 2016 Statistics Canada Survey has been provided in an Excel spreadsheet through communication between the authors and Statistics Canada.). With a Statistics Canada survey, one can have confidence that the estimates are likely to be unbiased. The 2016 estimates for non-employee, small, and medium-sized businesses are published, but no estimates of the compliance costs are provided for large businesses. To estimate the compliance costs for large businesses, we compare our data with European data. According to European data, large businesses' compliance costs were approximately 65% higher than those of medium-sized businesses. We use the same proportion to estimate the compliance costs of Canadian large businesses. These costs, by type of business, are expressed in 2016 Canadian dollars and presented in Table 2, column 1. To reflect the 2024 value, these costs are then adjusted for the cumulative inflation and the cumulative growth in real wages in Canada of 6.4% between 2016 and 2024 (Statistics Canada, 2025). The values are reported in Table 2, column 2. The estimated compliance costs for large businesses are the highest, averaging CAD 1,963.40, followed by medium-sized businesses at CAD 1,190, small businesses at CAD 924.20, and non-employer businesses at CAD 591.20.

Table 2. Total enterprise tax compliance costs GST/HST by the size of the enterprise, CAD per business

Business size	Canada (2016)	Canada (2024)
	1	2
Large	1,476.3	1,963.4
Medium	894.7	1,190.0
Small	694.9	924.2
Non-employer	444.5	591.2

The compliance costs that businesses incur to meet the filing requirements of the GST/HST laws can be categorized into four main types: data collection, preparation of the return, review of the return prior to submission, and the cost of submitting the return. If the government were to instead prefill the tax returns, at least the costs of data collection and return preparation would be removed. The EU survey of the costs incurred by businesses to comply with VAT prefilling tax returns (European Commission, 2018) indicates that approximately 77% of these costs are generated by data collection and form preparation (see Table 3).

Table 3. Tax compliance costs for GST/HST (VAT) by task and by the size of the enterprise

	GST/HST (VAT)				
Costs	Micro	Small	Medium	Large	
Data collection cost	55%	44%	70%	46%	
Preparation cost	23%	22%	15%	31%	
Review cost	12%	19%	9%	16%	
Submission cost	10%	15%	6%	7%	

The 77% reduction in business compliance costs results in annual savings of CAD 1,511.80 for large businesses, CAD 916.30 for medium-sized businesses, CAD 711.60 for small businesses, and CAD 455.20 for non-employee businesses (self-employed individuals). These values, estimated using Equation 1, are reported in Table 4, column 1.

**Table 4.** Annual and present value (PV) over 10 years of cost savings from prefilling GST/HST implementation, CAD per business (2024)

Business size	Annual GST/HST compliance costs savings	PV of GST/HST compliance costs savings	PV of the cost of implementation	PV net savings after deducting implementation costs
	1	2	3	4
Large	1,511.8	11,735.6	4,000.0	7,735.6
Medium	916.3	7,112.5	384.0	6,728.5
Small	711.6	5,523.9	384.0	5,139.9
Non-employer	455.2	3,475.6	377.7	3,097.9

The annual compliance cost reductions are projected for 10 years. Average hourly wages are increased by approximately 1% over time (Statistics Canada, 2025), to reflect the rise in real wages of accountants, bookkeepers, and the primary skill groups employed to complete GST/HST returns. The present value of these savings, calculated using Equation 2 over 10 years (using a real discount rate of 7%), is presented in Table 4, column 2.

To implement prefilled returns, business personnel will require additional training. The parameters used to estimate these training costs are reported in Table A1 in the Appendix. For these items, we assume that the financial and economic costs of the training activities are equal. In other words, there are no significant tax or subsidy distortions in the evaluation of these costs. We also assume that these businesses will incur no additional software or computer costs to adapt their systems to electronic invoicing, enabling them to provide GST/HST collection data to the government. In Chile and some EU countries, such as Italy, the government has provided a free app for VAT filers to ensure compatibility between

electronic invoicing and the government's information requirements for prefilling VAT returns. Using Equation 4, the present value of the implementation cost by business type is reported in Table 4, column 3.

Using Equation 5, the present values of the net benefits of compliance cost savings over 10 years to businesses, by size, are estimated and reported in Table 4, column 4. For large businesses, the savings amount to CAD 7,735.60; for medium, small, and non-employer businesses, the savings are CAD 6,728.50, CAD 5,139.90, and CAD 3,097.90, respectively. These net savings in business compliance costs form the basis for estimating both the financial and economic benefits of implementing a prefilled returns system for GST/HST.

**Table 5.** Present value of net compliance cost savings before taxes for all businesses in Canada over 10 years, by province (CAD million)

Province	Large businesses 500+	Medium businesses (100–499)	Small businesses (1–99)	Non- employee businesse	Total
				<u> </u>	
	1	2	3	4	5
Newfoundland and Labrador	0.2	1.8	94.9	27.5	124.3
Prince Edward Island	0.1	0.7	34.1	28.4	63.3
Nova Scotia	0.6	3.7	159.5	105.3	269.1
New Brunswick	0.4	3.1	131.7	62.4	197.6
Quebec	5.5	35.0	1,379.5	1,333.7	2,753.7
Ontario	9.4	60.1	2,487.5	3,252.3	5,809.3
Manitoba	1.0	5.3	216.6	201.2	424.2
Saskatchewan	0.5	3.9	215.7	302.1	522.2
Alberta	2.7	19.3	870.6	1,021.7	1,914.3
British Columbia	2.6	20.4	1,073.3	1,064.1	2,160.4
Territories	0.04	0.6	21.0	9.0	30.6
Total Canada	22.9	153.9	6,684.4	7,407.8	14,269.1
Percentage	0.2%	1.1%	46.8%	51.9%	100.0%

To derive the present value of the net savings to all businesses in Canada over 10 years and distributed across the provinces, the annual savings are multiplied by the annual number of businesses in each category, as reported in Table 1. When making projections of cost savings, the initial survey for the number of businesses is adjusted by 1% per year to reflect the growth in the number of businesses over time. In Table 5, the present values for the economic benefits to the country and the before-tax financial benefits to businesses that accrue over 10 years are reported for Canada, as well as by each province and territory.

These values are presented in Table 5, column 5. They are also reported by business size and by jurisdiction in columns 1, 2, 3, and 4.

The financial present value of the total benefits is estimated to be about CAD 14.3 billion, with 98.8% of the benefits being created by the reduction in compliance costs of small and non-employee businesses. Of the total benefits, Ontario would receive the largest share, at 41% of the total, followed by Quebec at 19%, British Columbia at 15%, and Alberta at 13%. The business communities in these four provinces would gain 88% of the Canada-wide gains from this intervention.

Due to the reduction in compliance costs, the reported expenses of doing business by these firms should decrease, and hence the amount of taxable income should increase by the same amount. It follows that, as expressed by Equations 6 and 7, there will be an increase in income taxes paid by these businesses equal to their respective tax rates multiplied by the change in the amount of taxable income. To estimate the additional provincial and federal tax revenues, one needs to select a set of representative tax rates that would be applied to taxable income earned by firms, based on the size and tax jurisdiction of the business.

For large and medium businesses, the federal and provincial corporate income tax rates are applied to the change in taxable income. No further increased tax that might be paid at the shareholder level of the firm is considered; additionally, some additional tax may be paid when dividend distributions occur. In Canada, the income earned by small and non-employee businesses is integrated for tax purposes with the income of the shareholders. Hence, instead of applying the very low small business tax rates, the first level of the marginal income tax of individuals is applied. These tax rates by tax jurisdiction and firm size are presented in Table A2 in the Appendix.

By applying these income tax rates to the amount of compliance cost savings reported in Table 5, a set of estimates is derived using Equation 8 for the increase in tax revenues paid by these businesses to both the federal and provincial/territorial governments in Canada. The estimates of the total present values of the increased revenues for the period 2025–2035 by province and the Federal Government are reported in Table 6, column 5. The present value of the total increase in income tax revenues is estimated to be CAD 3.3 billion, with 98.6% of the amount being paid by small and non-employee businesses, who would be the main beneficiaries of this intervention.

**Table 6.** Present value of additional provincial and federal revenues from increased taxable income over 10 years of prefilled GST/HST return implementation (CAD million), 2024 values

Province	Large businesses 500+	Medium businesses (100-499)	Small businesses (1–99)	Non- employee businesses	Total
	1	2	3	4	5
Newfoundland and Labrador	0.1	0.1	22.5	6.5	29.1
Prince Edward Island	0.02	0.03	8.4	6.6	15.0
Nova Scotia	0.2	0.1	37.9	25.1	63.3
New Brunswick	0.1	0.1	30.0	15.2	45.4
Quebec	1.4	1.3	400.1	386.8	789.6
Ontario	2.5	2.2	498.7	652.1	1,155.5
Manitoba	0.3	1.4	55.9	51.9	109.5
Saskatchewan	0.1	1.1	55.0	77.0	133.2
Alberta	0.6	4.4	217.6	255.4	478.1
British Columbia	0.7	5.5	215.3	213.5	435.0
Territories	0.01	0.2	4.3	1.8	6.3
Total Canada	6.0	40.5	1,545.7	1,692.0	3,284.2
Percentage	0.2%	1.2%	47.1%	51.5%	100.0%

With the results of the net economic benefits to businesses reported in Table 5 and the increase in income tax payments reported in Table 6, the net financial impact on businesses in Canada can be estimated (see Equation 9). These estimates are presented in Table 7, both by firm size and by political jurisdiction. The present value of the immediate financial gain, net of income taxes, for businesses in Canada is estimated to be CAD 11 billion over the next 10 years (Table 7, column 5). Of this amount, 98.8% of the net financial benefits would be received by the small and non-employee establishments.

**Table 7.** Present value of net compliance cost savings after faxes for all businesses in Canada over 10 years, by province (CAD million)

Province	Large businesses (500+)	Medium businesses (100–499)	Small businesses (1-99)	Non- employee businesses	Total
	1	2	3	4	5
Newfoundland and Labrador	0.2	1.7	72.4	21.0	95.2
Prince Edward Island	0.04	0.7	25.7	21.8	48.2
Nova Scotia	0.4	3.6	121.6	80.3	205.8
New Brunswick	0.3	2.9	101.7	47.2	152.1
Quebec	4.0	33.7	979.5	947.0	1,964.1
Ontario	6.9	57.9	1,988.8	2,600.2	4,653.8

Manitoba	0.7	3.9	160.8	149.3	314.7
Saskatchewan	0.4	2.9	160.7	225.1	389.0
Alberta	2.1	14.9	652.9	766.3	1,436.2
British Columbia	1.9	14.9	858.0	850.7	1,725.5
Territories	0.03	0.4	16.7	7.2	24.3
Total Canada	16.9	113.4	5,138.7	5,715.9	10,984.9
Percentage	0.2%	1.0%	46.8%	<b>52.0</b> %	100.0%

In summary, the methodological framework and empirical analysis presented in this section highlight the potential compliance savings for Canadian GST/HST filers. By applying a cost-benefit methodology, the analysis quantifies how prefilled returns could reduce reporting burdens and improve accuracy, demonstrating the tangible benefits of this administrative innovation. While the focus here is on the potential benefits to the private sector, these findings provide an essential foundation for evaluating the broader institutional and operational implications. The following section, therefore, shifts attention to the cost implications for the CRA/RQ as well as the economic benefits to the country.

# Estimation of financial and economic benefits and costs to the public sector

So far, our analysis has focused on the impact of this intervention on private GST/HST filers. However, it is anticipated that this major administrative innovation will impose some costs, at least in the short term, on both CRA and RQ. RQ administers both the GST for the Federal Government and the Quebec Sales Tax for the provincial government.

Because the Federal Government compensates the Province of Quebec for the administration costs of collecting the GST in Quebec for the Federal Government, we do not try to break down the impact of this reform on the administration costs and benefits originating from the CRA and RQ. The estimated costs presented below reflect the combined impact on administration costs, including for both Quebec and the rest of Canada.

Given the comprehensive information base that the tax administration would have through prefilling returns, it is expected that prefilling returns would also lead to tax administration efficiencies in the collection and auditing of the GST/HST. However, in the appraisal of this intervention, the assumption is made that there are no long-term tax administration cost savings due to its implementation.

In this analysis, it is assumed that there will be some start-up costs for the first five years, consisting of the salaries of a change management team, which have a present value of CAD 35.1 million, and additional training costs for tax administration personnel, which would be CAD 10.5 million, as reported in Table 8, rows 1 and 2.

No public estimates exist for Canada on the financial and economic costs associated with the additional IT requirements of administrative prefilling of GST/HST returns. The potential set of costs that the CRA and RQ might incur to introduce this innovation is described by the components of Equation 10. The suggested parameter values are set out in Table A3 in the Appendix. In 2024, the total value of IT services obtained by the CRA from Shared Services Canada was estimated to be CAD 401.9 million (Canada Revenue Agency, 2024b, Table 7). In the case of Chile, where a system of prefilling VAT returns is fully implemented, serving 1,020,115 businesses, the additional annual IT costs were estimated at USD 6 million (Jenkins et al., 2023). To arrive at a conservative estimate of the net economic benefits of this tax administration intervention, the additional annual IT costs are assumed to be CAD 65 million, representing approximately a 16% increase in the entire IT budget for the CRA. Over the 10-year appraisal period, these costs are assumed to increase by 2% each year in real terms. The present value of these IT costs over the appraisal period is estimated to be CAD 462 million. Additionally, the present value of the estimated additional human resources required over the 10-year period for the program's operation is estimated to be CAD 118 million. The present value of the sum of these two operating cost items amounts to CAD 580 million, as reported in Table 8, row 3. With these assumptions, we arrive at a present value of the additional administration costs over the 10 years of CAD 625.6 million (See Table 8, row 4). The assumption is made that the financial values of these public sector budgetary costs closely reflect their economic resource costs. No further adjustment is made.

**Table 8.** Financial and economic costs incurred by tax administration

	PV 10-years (CAD million), 2024 values
1. PV initial change management team cost	35.1
2. PV initial CRA staff training cost	10.5
3. PV IT operating cost	580.0
4. PV total tax administration costs	625.6

## Economic outcomes of prefilled GST/HST returns

From the economy's point of view, the benefits are the net resource cost savings by each of the business groups that are GST-/HST-registered taxpayers. These savings are calculated in Table 5 and reported in Table 9, rows 1 to 4. From the total of these amounts, one needs to subtract the net resource costs incurred by the CRA and RQ if it were to implement this system of prefilled returns (see Equation 12). This value is estimated in Table 8 and reported again in Table 9, row 5. The estimated economic present value for the first 10 years after the implementation of this intervention is a positive CAD 13.6 billion net benefit to the economy (Table 9, row 6). This is an underestimate of the economic benefit to Canada from implementing prefilled GST/HST returns. It is assumed that the current costs of checking

and submitting the return would remain the same as they are now. These components of compliance costs will also be reduced, but not eliminated, with the prefilling of the returns.

Table 9. Economic perspective

Economic perspective PV 10-years (CAD million), 2024 values @ 7% discount rate				
1. Large businesses	22.9			
2. Medium businesses	153.9			
3. Small businesses	6,684.4			
4. Non-employee businesses	7,407.8			
5. Tax administration	(625.6)			
6. Economy	13,643.5			

# Stakeholder analysis

The two main stakeholder groups affected by this intervention are businesses and the government. The government's net financial position comprises several components. First, the additional income tax revenue generated in Canada due to the reduction in business costs is split between the provincial and territorial governments and the Federal Government. The distribution of revenue gained by the province and the Federal Government is reported in Table A2 in the Appendix.

From the present value of the estimated increase in tax revenues of CAD 3,284.2 million, approximately one third will accrue to the provincial and territorial governments and two thirds will accrue to the Federal Government (Table 10, rows 1, 2, and 3). After deducting the estimated additional costs incurred by the tax administration to implement this system, the net financial revenue gain by the governments of Canada is CAD 2.6586 billion (Table 10, row 5).

**Table 10.** Government budgetary impact

Government	2024 values, 10-year PV, CAD million
1. PV federal additional revenues	2,138.8
2. PV provincial additional revenue	1,145.4
3. PV incremental total tax revenue	3,284.2
4. PV total incremental administration costs	-625.6
5. Net financial benefit for governments	2,658.6

The net economic benefit to Canada, as reported in Table 9, is approximately CAD 13.6 billion. The net financial benefit to GST/HST filers is CAD 11 billion, while the net financial revenue gain to the Canadian government is CAD 2.6 billion. This reconciliation is presented in Table 11, where the value of the economic benefits is equal to the distributed benefits received by the businesses and the governments of Canada.

Table 11. Reconciliation

Reconciliation	2024 values, 10-year PV, CAD million
Economy—NPV	13,643.5
<ul> <li>Net financial benefits, business perspective</li> </ul>	10,984.9
<ul> <li>Total government budgetary impacts</li> </ul>	2,658.6

## Conclusions and implications for GST/HST tax policy

The implementation of prefilled GST/HST returns in Canada has the potential to reduce compliance costs and burdens for businesses while enhancing the overall administrative efficiency of the tax system. The cost-benefit analysis of prefilled GST/HST returns suggests that this initiative can reduce compliance costs for businesses by a substantial amount while also generating additional income tax revenues for both the provincial and federal levels of government. About 99% of the cost reductions resulting from this administrative innovation would accrue to small and self-employed businesses in Canada.

In this analysis, certain potential benefits have been excluded, including any cost savings for the CRA and RQ and improvements in GST/HST revenue compliance. These components, while significant from the government's perspective, are excluded to focus on the direct financial and economic benefits to businesses and the broader economy. Even after excluding these government-side benefits, the results show substantial gains accruing to the Canadian economy, enhancing the cost competitiveness of Canadian businesses. The analysis estimates a net welfare gain of approximately CAD 13.6 billion over the 10 years, with most of the savings benefiting small and self-employed businesses. For these businesses, lower compliance costs translate into more time for growth, innovation, and job creation.

The move toward electronic invoicing and the prefilling of GST/HST will also create incentives to harmonize further the tax bases of the GST and provincial sales taxes. Many exemptions in these tax bases can be removed with little or no impact on income distribution. However, the economic efficiency of the Canadian economy will likely be improved. Evidence suggests that exemptions intended to support lower-income households often provide disproportionately larger benefits to higher-income households (Abshari et al., 2021). Furthermore, with the simplification of the VAT, overall tax compliance can be expected to increase (Agha & Haughton, 1996).

Federal leadership will be essential to advance these reforms. Federal regulations for the standardization of e-invoicing information, similar to practices already used by credit card providers, would facilitate a smooth transition. Moreover, the Federal Government's policy of maintaining a low registration threshold for GST/HST ensures that the prefilled system

can be implemented without needing to expand coverage to other business entities. Pilot projects led by the CRA, along with support for small businesses, will help to ensure a smooth and equitable transition.

To date, no Canadian study has evaluated the potential of prefilled GST/HST returns. This study addresses that gap by applying an integrated financial, economic, and stakeholder cost-benefit analysis to the GST/HST system. Evidence from countries such as Chile, Italy, and Estonia demonstrates that prefilled returns can ease compliance burdens while strengthening fairness and efficiency. This study provides the first evidence of how similar reforms could work in Canada, offering a clear path forward for modernizing tax administration.

In short, prefilled GST/HST returns represent an administrative innovation that benefits both businesses and governments. Prompt action is essential, as digital tools are readily available, and delays will result in unnecessary and unrecoverable costs. By adopting this reform, Canada can modernize its tax system, making it simpler, more automated, and better suited to the realities of a modern, digital economy.

# **Appendix**

Table A1. Businesses budgeting

	Large	Medium	Small	Non-employee
Cost of computer system changes per firm	0	0	0	0
(CAD)				
Training cost per firm (hours)	40	8	8	8
Percentage number of businesses affected (%)	100	100	100	100
Average hourly wage of labour/time (CAD/hr)	100	48	48	48
Total investment cost (CAD million)	11.2	8.3	486.5	867.5

**Table A2**. Provinces and territories' corporate income tax rates

Drovince	Cornorata	income tax
FIUVIIICE/	CUIDUIALE	IIICUIII <del>c</del> tax

			Small and n	on-employee		
	Large and medium businesses		businesses			
	Federal	Provincial		Federal		
	corporate	corporate		corporate	Provincial	
	income	income		income	corporate	
	taxes	tax	Total	taxes	income tax	Total
Newfoundland and						
Labrador	15%	15%	30%	15%	8.7%	23.7%
Prince Edward Island	15%	16%	31%	15%	9.5%	24.5%
Nova Scotia	15%	14%	29%	15%	8.8%	23.8%
New Brunswick	15%	14%	29%	15%	9.4%	24.4%
Quebec	15%	11.5%	26.5%	15%	14%	29.0%
Ontario	15%	11.5%	26.5%	15%	5.1%	20.1%
Manitoba	15%	12%	27%	15%	10.8%	25.8%
Saskatchewan	15%	12%	27%	15%	10.5%	25.5%
Alberta	15%	8%	23%	15%	10%	25.0%
British Columbia	15%	12%	27%	15%	5.1%	20.1%
Northwest Territories	15%	11.8%	26.8%	15%	5.4%	20.4%

**Table A3.** Tax administration budgeting

Personnel costs (for five years of change management)		
Working hours/year	2,000	
Number of workers/years in the transition management team	40	
Average hourly wage cost for TA employees (CAD/hr)	100	
Training costs (for five years)		
Number of training hours/year/person	120	
Number of trainees/year	200	
Total investment cost (CAD million)	45.6	
Annual operation costs		
Incremental IT services cost/year (CAD million)	65	
Additional personnel cost of prefilled returns (for 10 years)		

Number of working hours/year	2,000
Number of workers/year	80
Average hourly total cost for TA employees (CAD/hr)	44.6

**Table A4.** Additional corporate income tax revenue per province

Corporate income tax revenue analysis	PV (CAD million), 2024 values
Newfoundland and Labrador	10.9
Prince Edward Island	5.9
Nova Scotia	23.9
New Brunswick	17.9
Quebec	384.5
Ontario	297.9
Manitoba	45.9
Saskatchewan	54.9
Alberta	191.0
British Columbia	110.9
Territories	1.7
Total provincial revenue	1,145.4
Total federal revenue	2,138.8
Total additional tax revenue for the government	3,284.2

## References

Abshari, Zhila, Glenn P. Jenkins, Chun-Yan Kuo, and Mostafa Shahee. 2021. "Progressive Taxation versus Progressive Targeted Transfers in the Design of a Sustainable Value Added Tax System," *Sustainability* 13(20): 11165. https://doi.org/10.3390/su132011165

Agenzia delle Entrate. 2022. Electronic invoicing (*Fatturazione elettronica*), Government of Italy. Available at <a href="https://www.agenziaentrate.gov.it/portale/web/english/electronic-invoicing">https://www.agenziaentrate.gov.it/portale/web/english/electronic-invoicing</a>

Agha, Ali, and Jonathan Haughton. 1996. "Designing VAT systems: Some efficiency considerations," *The Review of Economics and Statistics*, 78(2): 303–308. https://doi.org/10.2307/2109932

Akagi, Kaya. 2024. "What does e-invoice data bring to SNA and real-time economy?" *Journal of Economic Structures*, 13(15). https://doi.org/10.1186/s40008-024-00335-0

Ariganello, Anthony, François Vaillancourt, Édison Roy-César, and Maria Silvia Barros. 2013. The compliance and administrative costs of taxation in Canada 2013, *Fraser Institute Studies in Tax Policy*, Fraser Institute, 30 April. Available at <a href="https://ssrn.com/abstract=2317507">https://ssrn.com/abstract=2317507</a>

Bain, Kathrin, Michael Walpole, Ann Hansford, and Chris Evans. 2015. "The internal costs of VAT compliance: Evidence from Australia and the United Kingdom and suggestions for mitigation," eJournal of Tax Research, 13(1): 158–182. https://ssrn.com/abstract=3727115

Barreix, Alberto Daniel, and Raul Zambrano (Eds.). 2018. *Electronic Invoicing in Latin America*. Inter-American Development Bank. https://doi.org/10.18235/0001038

Bellon, Matthieu, Era Dabla-Norris, Salma Khalid, and Frederico Lima. 2022. "Digitalization to Improve Tax Compliance: Evidence from VAT e-Invoicing in Peru," *Journal of Public Economics*, 210, 104661. <a href="https://doi.org/10.1016/j.jpubeco.2022.104661">https://doi.org/10.1016/j.jpubeco.2022.104661</a>

Berhan, Bahro A., and Glenn P. Jenkins. 2005. "The high costs of controlling GST and VAT evasion," *Canadian Tax Journal*, 53(3): 720. https://ssrn.com/abstract=871737

Caluwaerts, Philippe. 2010. "Towards a European electronic invoicing framework: Why businesses, service providers and consumers should switch to e-invoicing," *Journal of Payments Strategy & Systems*, 4(3): 231–241.

https://ideas.repec.org/a/aza/jpss00/y2010v4i3p231-241.html

Canada Revenue Agency. 2021a. *Instructions for preparing a GST/HST return* [Return instructions]. <a href="https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/gst-hst-businesses/complete-file-instructions.html">https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/gst-hst-businesses/complete-file-instructions.html</a>

Canada Revenue Agency. 2021b. *Charge and collect the tax – Receipts and invoices* [Invoice requirements]. <a href="https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/gst-hst-businesses/charge-collect-receipts-invoices.html">https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/gst-hst-businesses/charge-collect-receipts-invoices.html</a>

Canada Revenue Agency. 2024a. *GST/HST filing compliance study (2024): Final report* (Catalogue No. Rv4-210/2025E-PDF). Government of Canada.

https://publications.gc.ca/collections/collection\_2025/arc-cra/Rv4-210-2025-eng.pdf

Canada Revenue Agency. 2024b. Future-oriented Statement of Operations – Agency activities. In 2024–25 CRA Departmental Plan. Government of Canada.

https://www.canada.ca/en/revenue-agency/corporate/about-canada-revenue-agency-cra/departmental-plan/2024-25-cra-departmental-plan/future-oriented-statement-operations.html

Canada Revenue Agency. 2024c. Table 1: Number of goods and services tax/harmonized sales tax filers by jurisdiction, 2018 to 2022. In *GST/HST Statistics* – 2024 Edition. Government of Canada. <a href="https://www.canada.ca/content/dam/cra-arc/prog-policy/stats/gst-hst-stats/2024/tbl01-2024-en.pdf">https://www.canada.ca/content/dam/cra-arc/prog-policy/stats/gst-hst-stats/2024/tbl01-2024-en.pdf</a>

Canadian Federation of Independent Business. 2025. *Canada's Red Tape Report 2025*. <a href="https://www.cfib-fcei.ca/en/research-economic-analysis/canadas-red-tape-report">https://www.cfib-fcei.ca/en/research-economic-analysis/canadas-red-tape-report</a>

Choi, Jonathan H., and Ariel J. Kleiman. 2024. "Subjective Costs of Tax Compliance," *Minnesota Law Review*, 108(3): 1255.

https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1045&context=minnlrev

Clemens, J. (Ed.). 2008. The Impact and Cost of Taxation in Canada: The case for flat tax reform. The Fraser Institute. <a href="https://www.fraserinstitute.org/sites/default/files/impact-and-cost-of-taxation-in-canada-2008.pdf">https://www.fraserinstitute.org/sites/default/files/impact-and-cost-of-taxation-in-canada-2008.pdf</a>

Cléroux, Pierre. 1992. "Small business and the cost of paperwork: The goods and services tax," *Journal of Small Business & Entrepreneurship*, 9(4): 27–39. https://doi.org/10.1080/08276331.1992.10600411

European Commission. 2018. *Study of Tax Compliance Costs for SMEs – Final report*. Publications Office. <a href="https://doi.org/10.2826/02329">https://doi.org/10.2826/02329</a>

European Commission. 2019. *Estonian electronic tax filing system (E-Tax)*. European Commission Digital Building Blocks, July 29. <a href="https://ec.europa.eu/digital-building-blocks/sites/spaces/DIGITAL/blog/2019/07/29/533365967/Estonian+electronic+tax+filing+system+E-Tax">https://ec.europa.eu/digital-building-blocks/sites/spaces/DIGITAL/blog/2019/07/29/533365967/Estonian+electronic+tax+filing+system+E-Tax</a> [ec.europa.eu]

European Commission. 2020a. *VAT gap in the EU: Report 2020*. Publications Office of the European Union. <a href="https://taxation-customs.ec.europa.eu/vat-gap-eu-27-member-states-2020-report\_en">https://taxation-customs.ec.europa.eu/vat-gap-eu-27-member-states-2020-report\_en</a>

European Commission. 2020b. *VAT in the digital age: Report on electronic invoicing and digital reporting requirements*. Publications Office of the European Union. <a href="https://taxation-customs.ec.europa.eu/document/download/d575f78a-6afe-4e1c-8ae1-dd754fc36b35">https://taxation-customs.ec.europa.eu/document/download/d575f78a-6afe-4e1c-8ae1-dd754fc36b35</a> en?filename=VAT%20in%20the%20Digital%20Age Final%20Report%20Executive%20Summary%20EN.pdf

European Commission. 2022. *Tax compliance costs for SMEs – An update and a complement: final report*. Publications Office of the European Union. <a href="https://data.europa.eu/doi/10.2873/180570">https://data.europa.eu/doi/10.2873/180570</a>.

Evans, Chris, Ann Hansford, John Hasseldine, Philip Lignier, Sharon Smulders, and François Vaillancourt. 2014. "Small business and tax compliance costs: A cross-country study of managerial benefits and tax concessions," *eJournal of Tax Research*, 12(2): 453–482. https://ssrn.com/abstract=3727120

Fraser Institute. 2019. *Tax complexity in 2019: Can it be tamed?* https://www.fraserinstitute.org/studies/tax-complexity-2019-can-it-be-tamed

Government of Canada. 2025. Canada's Digital Ambition 2024-25. Canada.ca. https://www.canada.ca/en/government/system/digital-government/canada-digital-ambition/canada-digital-ambition-2024-25

Guenther, Gary. 2022. *Prefilled individual income tax return filing: What it is and policy issues* (CRS Insight IN11992). Congressional Research Service. <a href="https://crsreports.congress.gov/product/pdf/IN/IN11992">https://crsreports.congress.gov/product/pdf/IN/IN11992</a>

Gupta, Sanjeev, Michael Keen, Alpha Shah, and Genevieve Verdier. 2017. *Digital revolutions in public finance*. International Monetary Fund. https://doi.org/10.5089/9781484315224.071

Heinemann, Marwin, and Wojciech Stiller. 2025. "Digitalization and cross-border tax fraud: Evidence from e-invoicing in Italy," *International Tax and Public Finance*, 32(1): 195–237. https://doi.org/10.1007/s10797-023-09820-x

Highfield, Richard, Chris Evans, Binh Tran-Nam, and Michael Walpole. 2019. *Diagnosing the VAT compliance burden: A cross-country assessment*. https://doi.org/10.2139/ssrn.3726376

Jenkins, Glenn P., Siamand Hesami, Osaid Alshamleh, Anastasiya Yarygina, and Carola Pessino. 2023. *A cost-benefit analysis methodology for administrative prefilling of value-added tax returns: An application for Chile*. Inter-American Development Bank. <a href="http://dx.doi.org/10.18235/0005068">http://dx.doi.org/10.18235/0005068</a>

Kalvet, Tarmo. 2012. "Innovation: a factor explaining e-government success in Estonia," *Electronic Government, an International Journal*, 9(2): 142–157. https://www.inderscienceonline.com/doi/abs/10.1504/EG.2012.046266

Kotsogiannis, Christos, Luca Salvadori, John Karangwa, and Innocent Murasi. 2025. "E-invoicing, tax audits and VAT compliance," *Journal of Development Economics*, 172, 103403. https://doi.org/10.1016/j.jdeveco.2024.103403

Laurin, Alexandre, and Nicholas Dahir. 2022. *Automatic tax filing: A challenging idea for Canada*. Commentary No. 616. Toronto: C.D. Howe Institute.

https://www.cdhowe.org/wp-content/uploads/2024/12/Commentary\_6162028129.pdf

Martínez-Vázquez, Jorge, Eduardo Sanz-Arcega, and José Manuel Tránchez-Martín. 2022. *Tax revenue management and reform in the digital era*. International Center for Public Policy Working Paper 22-01. <a href="https://icepp.gsu.edu/files/2022/03/2201-Digital-Tax-Administration\_.pdf">https://icepp.gsu.edu/files/2022/03/2201-Digital-Tax-Administration\_.pdf</a>

Mazereel, Dries, and Giverny Hermans. 2025. Seven ways early adopters are managing pre-populated VAT returns. EY, 15 January. <a href="https://www.ey.com/en\_gl/insights/tax/seven-ways-early-adopters-are-managing-pre-populated-vat-returns">https://www.ey.com/en\_gl/insights/tax/seven-ways-early-adopters-are-managing-pre-populated-vat-returns</a>

Nose, Manabu, and Andualem Mengistu. 2023. Exploring the adoption of selected digital technologies in tax administration: A cross-country perspective. IMF Notes, 2023/008.

International Monetary Fund.

https://www.elibrary.imf.org/view/journals/068/2023/008/article-A001-en.xml

Okunogbe, Oyebola, and Fabrizio Santoro. 2023. "The promise and limitations of information technology for tax mobilization," *The World Bank Research Observer*, 38(2): 295–324. https://doi.org/10.1093/wbro/lkac008

OECD. 2015. "Taxation of SMEs in OECD and G20 Countries," OECD Tax Policy Studies, No. 23. Paris: OECD Publishing. <a href="https://doi.org/10.1787/9789264243507-en">https://doi.org/10.1787/9789264243507-en</a>

OECD. 2020a. "Digital Government Index: 2019 results," OECD Public Governance Policy Papers, No. 03. Paris: OECD Publishing.

OECD. 2020b. *Tax Administration 3.0: The Digital Transformation of Tax Administration*. OECD Forum on Tax Administration. <a href="https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/tax-administration-3-0-the-digital-transformation-of-tax-administration.htm">https://www.oecd.org/tax/forum-on-tax-administration-administration-tax-administration-tax-administration.htm</a>

OECD. 2020c. *E-invoicing and digital reporting requirements*. OECD Forum on Tax Administration. <a href="https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/e-invoicing-and-digital-reporting-requirements.htm">https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/e-invoicing-and-digital-reporting-requirements.htm</a>

OECD. 2022a. *Tax Administration 2022: Comparative Information on OECD and other Advanced and Emerging Economies*. Paris: OECD Publishing. <a href="https://doi.org/10.1787/1e797131-en">https://doi.org/10.1787/1e797131-en</a>

OECD. 2022b. *Towards* seamless taxation: Supporting SMEs to get tax right. OECD Forum on Tax Administration. <a href="https://www.oecd.org/en/publications/towards-seamless-taxation">https://www.oecd.org/en/publications/towards-seamless-taxation</a> 656c89ab-en.html

OECD. 2022c. *OECD Economic Surveys: Estonia 2022*. Paris: OECD Publishing. https://doi.org/10.1787/21ef46e4-en

OECD. 2025. *Tax administration digitalisation and digital transformation initiatives*. Paris: OECD Publishing. <a href="https://www.oecd.org/en/publications/tax-administration-digitalisation-and-digital-transformation-initiatives\_c076d776-en/full-report/component-9.html">https://www.oecd.org/en/publications/tax-administration-digital-transformation-initiatives\_c076d776-en/full-report/component-9.html</a>

Rocha, Melina. 2022. "Policy forum: How Canada could benefit from e-invoicing for GST/HST purposes," *Canadian Tax Journal*, 70(2): 361–373.

https://www.ctf.ca/EN/Publications/CTJ\_Contents/2022CTJ2.aspx

Servicio de Impuestos Internos (SII). 2025. Resolución Exenta N.º 44: Sistema de Facturación Electrónica (Facturación Electrónica). Government of Chile. https://www.sii.cl/normativa\_legislacion/resoluciones/2025/reso44.pdf

Smulders, Sharon, and Chris Evans. 2017. "Mitigating VAT compliance costs: A developing country perspective," *Australian Tax Forum*, 32(2): 283–316.

https://ssrn.com/abstract=3782956

Statistics Canada. 2022. Canadian Business Counts, with employees, June 2022 (Table 33-10-0568-01), 18 August. https://doi.org/10.25318/3310056801-eng

Statistics Canada. 2024. Response burden reduction efforts, 10 October. <a href="https://www.statcan.gc.ca/en/about/rbre">https://www.statcan.gc.ca/en/about/rbre</a>

Statistics Canada. 2025. Average usual hourly wage, employees aged 15 years and older, Canada, 2006 to 2024, 18 August. <a href="https://www150.statcan.gc.ca/n1/daily-guotidien/250818/cg-d001-eng.htm">https://www150.statcan.gc.ca/n1/daily-guotidien/250818/cg-d001-eng.htm</a>

United Nations Conference on Trade and Development (UNCTAD). 2020. *Digital economy report 2020: Cross-border data flows and development*. New York: United Nations Publications. <a href="https://unctad.org/system/files/official-document/tdr2020\_en.pdf">https://unctad.org/system/files/official-document/tdr2020\_en.pdf</a>

Vaillancourt, François, and Maria Silvia Barros. 2011. "The Tax Compliance Costs of Small and Medium Businesses in Canada, 2007," in *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, Vol. 104 <a href="https://www.jstor.org/stable/10.2307/prancotamamnta.104.212">https://www.jstor.org/stable/10.2307/prancotamamnta.104.212</a>

Vaillancourt, François, Milagros Palacios, and Jason Clemens. 2007. *Compliance and administrative costs of taxation in Canada*. Vancouver, BC: Fraser Institute. <a href="https://www.fraserinstitute.org/sites/default/files/TaxCompAdminCosts.pdf">https://www.fraserinstitute.org/sites/default/files/TaxCompAdminCosts.pdf</a>

World Bank, and PwC. 2019. *Paying taxes 2020: Comparing business regulation in 190 economies*. World Bank Group and PricewaterhouseCoopers.

https://archive.doingbusiness.org/en/reports/thematic-reports/paying-taxes-2020

World Bank. 2022. *GovTech maturity index, 2022 update: Trends in public sector digital transformation* (Equitable Growth, Finance and Institutions Insight – Governance). World Bank. <a href="http://hdl.handle.net/10986/38499">http://hdl.handle.net/10986/38499</a>

Zu, Yige, Chris Evans, and Richard Krever. 2020. "The VAT compliance burden in the UK: A comparative assessment," *British Tax Review*, 354–377.

https://ssrn.com/abstract=3679240