Policy Forum: The Public Transit Tax Credit—Ridership and Distributional Impact

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PRÉCIS
Cet article traite du crédit d’impôt non remboursable pour le transport en commun qui a été adopté dans le but de promouvoir l’utilisation du transport en commun. L’auteur fait un survol de la littérature empirique qui examine l’effet du crédit d’impôt et conclut qu’il n’y a aucune preuve que le crédit a eu l’effet désiré sur l’achalandage. Puisqu’un crédit de taxe non seulement crée des incitatifs, mais transfère également le revenu aux ménages, l’auteur évalue aussi l’incidence distributive du crédit d’impôt. Il a constaté que le crédit a été beaucoup plus utilisé par les contribuables dans les ménages fortunés que par ceux dans les ménages à faible revenu, contribuant ainsi à l’inégalité du revenu. L’auteur croit toutefois que la valeur politique accordée au crédit d’impôt pourrait empêcher qu’il ne soit aboli, même si son inefficacité peut être prouvée.

ABSTRACT
This article discusses the non-refundable public transit tax credit, which was introduced as a targeted incentive to promote public transit. The author provides an overview of the empirical literature studying the impact of the tax credit and finds that there is no evidence that the credit has had the intended effect on ridership. Since a tax credit not only creates incentives but also transfers income across households, the author also assesses the distributional impact of the tax credit. He finds that it was used disproportionately by taxfilers in wealthy households relative to those in lower-income households, thereby contributing to income inequality. However, in the author’s view, the perceived political value of the tax credit may prevent its abolition despite evidence of its inefficiency.

KEYWORDS: INCOME TAX CREDITS • TAX INCENTIVES • PUBLIC EXPENDITURES • ECONOMICS

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INTRODUCTION
The 2006 federal budget introduced the first of a series of “boutique tax credits.” The objective of these measures is to promote specific socially beneficial activities. The public transit tax credit, which took effect on July 1, 2006, belongs to this new category of tax credits. By reducing the after-tax cost of travel by public transit, the tax credit should create an “incentive to use public transit [to] ease traffic congestion and improve the environment.”1 The tax credit is non-refundable and reduces the claimant’s tax burden by 15 percent2 of the amount paid during the year for eligible transit passes.3 In 2012, 1.7 million individuals claimed the tax credit, and its cost in forgone revenue for the federal government was $207 million.4

More specifically, the public transit tax credit can be claimed for the cost of passes allowing unlimited travel within Canada during an extended period of time, on local buses, streetcars, subways, commuter trains, commuter buses, or local ferries.5 A taxfiler can claim the cost of annual and monthly passes, and the cost of short-term passes if

- each pass entitles the user to unlimited travel for at least 5 consecutive days and
- the passes purchased entitle the user to unlimited travel for at least 20 days in any 28-day period.

A taxfiler can also claim the cost of electronic fare payment cards if

- the card is used to make at least 32 one-way trips during an uninterrupted period not exceeding 31 days and
- the card is issued by a public transit authority that records and provides a receipt for the cost and usage of the card.

The taxfiler may claim eligible passes purchased for his or her own use or on behalf of a spouse or common-law partner or a child of the taxfiler under 19 years of age.

After the introduction of this tax credit, one can imagine commuters weighing the cost of public transit versus the cost of a personal vehicle and deciding to choose

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1 Canada, Department of Finance, 2006 Budget, Helping Individuals and Families (budget pamphlet), May 2, 2006.
2 This percentage corresponds to the lowest tax bracket and is therefore subject to change.
3 For example, a commuter who purchases a pass for $100 each month can reduce his or her income tax by $180 ($100 × 12 × 15%) assuming that his or her tax burden is greater than $180.
4 The Canada Revenue Agency (CRA) reported that in 2012 a total of $1.384 billion was claimed: Canada Revenue Agency, Final Statistics—2014 Edition (for the 2012 Tax Year) (Ottawa: CRA, 2014). The cost in forgone revenue is calculated as 15 percent of the amount claimed (that is, the amount eligible for reimbursement).
public transit. If enough commuters are incentivized in this fashion, the forgone tax revenue could, in effect, pay for significant environmental improvement. It is, however, unlikely that a large number of commuters would change their behaviour in order to obtain a 15 percent reduction in pass prices, because evidence suggests that factors other than price—for example, schedules, the speed of transit, and the frequency of service—matter more than price. Whether the tax credit is effective can be determined by measuring its impact on transit use. The first part of this article presents the methodology and results of three studies that have examined ridership data in order to assess whether the availability of the tax credit has led to increased transit use.

Beyond the potential impact on the behaviour of commuters, the public transit tax credit leads to a wealth transfer: individuals who can claim the credit receive an implicit transfer from those who cannot. Three conditions must be met for an individual to receive this transfer. First, the individual (or the individual’s spouse or common-law partner or child) must use public transit and have an eligible pass. Since public transportation is not equally distributed across Canada, the tax credit favours residents of urban centres offering such amenities. Second, the individual must be aware of the existence of the tax credit and properly claim it. Third, the individual must owe income tax in order to benefit from this non-refundable tax credit. The last two conditions put individuals with low English- or French-language literacy skills and those with a low income at a disadvantage. The second part of this article presents data on the propensity to claim the credit for different income groups and considers the social cost associated with subsidizing public transit using a tax credit.

**IMPACT OF THE TAX CREDIT ON RIDERSHIP**

To assess the causal impact of the tax credit on ridership, one must determine the difference between the number of commuters before and after the introduction of the tax credit in regions affected by the tax credit, and ideally compare this difference with the difference in ridership in regions unaffected by the credit. Unfortunately, since the public transit tax credit was made available from the outset to taxfilers across Canada, no Canadian region could show what would have happened to ridership in its absence. While it is sometimes possible to draw inferences about commuter behaviour from comparative studies in other similar jurisdictions, notably the United States, in this case recourse to such studies may not be helpful since it is unclear that American trends in ridership are comparable to Canadian trends. Accordingly, one must compare data on commuter behaviour in a particular region before and after the introduction of the tax credit, and assume that the year following the introduction of the credit was not special for any other reason. In spite of this empirical limitation, three studies have attempted to assess the impact of the tax credit.

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The Department of Finance was the first to evaluate the effectiveness of the public transit tax credit. Using annual data from 2001 to 2010, the study found that the average year-to-year percentage increase in ridership was 1.9 percent from 2001 to 2005 and 2.9 percent from 2006 to 2010, and concluded that the public transit tax credit was effective in increasing ridership. If this difference in the growth of ridership was indeed due to the introduction of the tax credit, as suggested in the report, one would expect the pattern of ridership variation to be similar to the pattern of variation in claims. As commuters would increasingly claim the tax credit, they would also increase their use of public transit. There is, however, no evidence for such a relationship. While the number of claims grew very rapidly at first (up to 916,525 in the first year), then more slowly to 1,473,046 in 2008, and plateaued at 1,642,250 in 2011, the year-to-year variation in ridership was first small (slightly above 3 percent) in 2006 and increased to slightly above 4 percent in 2011. In other words, when the increase in credit claiming was at its highest, the increase in ridership was at its lowest. It is already difficult to rely on only 10 observations to show the effectiveness of a policy. The differences in trends cast some doubt on the conclusions of this study, and other factors—such as the increase in gas prices throughout the period—could also be responsible for the increase in transit use.

Boncenne delivers more credible results on the impact of the tax credit by estimating a panel regression for all provinces from 1997 to 2009 and controlling for other factors that may have influenced the decision of commuters; he finds no statistically significant impact. In a more recent study, I confirmed these results using monthly data from seven major Canadian cities and controlling for city-specific events that may have affected transit use. Interestingly, I found that the policy did have an unintended consequence: it led commuters to switch from tickets to monthly passes when passes became relatively cheaper as a result of the tax credit. These two independent studies show no evidence that this targeted tax credit hit the target.

**DISTRIBUTIONAL IMPACT OF THE TAX CREDIT**

If the tax credit did not induce commuters to use public transportation, it was simply a transfer from those who did not claim the credit to those who claimed it. This section will discuss who among Canadian taxfilers could claim the tax credit and therefore take advantage of this transfer.

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8. Ibid.
The first condition to claim the credit is the use of public transit. Fifteen percent of households used public transit in Canada in 2007. An important determinant of public transit use is availability. While Ontario, with its large urban population, offered 74 percent of its residents nearby access to public transportation, in Prince Edward Island, which is a more rural province, only 23 percent of the residents enjoyed such access. Not surprisingly, a large share of the credit went to taxfilers in Ontario (48.1 percent) and almost nothing went to taxfilers in Prince Edward Island. The tax credit therefore disproportionately favours residents of areas that already benefit from excellent public amenities.

Use alone is not enough for transit riders to take advantage of the tax credit; the credit must also be actively claimed by a taxfiler. A rational economic agent would probably have no difficulty learning about this potential tax benefit, including the requirements to keep all receipts for passes purchased throughout the year and to claim the appropriate amount on his or her tax return. However, it is reasonable to assume that many taxfilers lack the foresight of the rational economic agent. It is impossible to know how many individuals could have claimed the credit but omitted to do so, but information on the registered education savings plan (RESP) does provide some information concerning the underuse of subsidies. The Department of Employment and Social Development estimates that only 31 percent of eligible children received the Canada learning bond, even though all that was required to receive this substantial subsidy was registration. One can therefore expect that a large number of taxfilers fail to claim the public transit tax credit because they do not know about it or about the requirements for making a claim. Taxfilers with low levels of English or French literacy probably have the most difficulty completing their tax returns and may therefore underuse the credit. By subsidizing public transport through a tax credit, the government is excluding certain groups that lack the skills to claim such a benefit.

Finally, since the tax credit is non-refundable, only taxfilers who owe income tax can actually receive a transfer. The tax credit is therefore worthless to low-income individuals. From table 1, one can even see that the propensity to claim the credit among those who pay income tax increases with income. Also interesting is the fact that the average claim per taxable return increases as income increases. This pattern cannot be explained by a higher propensity to use public transportation for higher-income households, as reported by Munro. It is more likely that members of higher-income households are more aware of the tax credit, as mentioned earlier, or

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12 Munro, supra note 6, at 3.
13 Tax Expenditures and Evaluations 2011, supra note 7, at 54.
14 Employment and Social Development Canada, Canada Education Savings Program: Annual Statistical Review 2014 (Ottawa: ESDC, 2015), at 36. Eligible children can receive $500 in the first year and $100 thereafter in their RESP if they are registered. No contribution is required to receive this subsidy.
15 Munro, supra note 6.
they may spend more on public transportation if they live farther away from their workplace. In either case, wealthy individuals are receiving more from the tax credit than are those with low incomes.

CONCLUSION

A targeted tax credit makes sense only if it hits the target, and there is no independent empirical evidence suggesting that the public transit tax credit has hit its target by increasing ridership. Moreover, introducing a subsidy in the form of a tax credit comes at a social cost. It implicitly excludes individuals with low literacy skills who will have difficulty taking advantage of this subsidy. Making the tax credit non-refundable explicitly excludes low-income individuals who do not owe any income tax. More generally, multiplying the number of such boutique tax credits increases the compliance cost of income tax both for taxfilers, who now need to keep records for all their socially beneficial activities and who must pay more attention when filing their tax return, and for the Canada Revenue Agency, which must now devote additional resources to verifying claims in order to prevent abuse. These hidden costs add to the $207 million in forgone tax revenue attributable to the tax credit.

If the federal government does indeed want to “ease traffic congestion and improve the environment,” it could simply transfer money to transit corporations

<table>
<thead>
<tr>
<th>Income range (dollars)</th>
<th>Share of taxable returns claiming tax credit</th>
<th>Average claim per taxable return</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000-24,999</td>
<td>6.35</td>
<td>45.55</td>
</tr>
<tr>
<td>25,000-29,999</td>
<td>7.05</td>
<td>55.80</td>
</tr>
<tr>
<td>30,000-34,999</td>
<td>6.91</td>
<td>58.21</td>
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<td>35,000-39,999</td>
<td>6.96</td>
<td>61.28</td>
</tr>
<tr>
<td>40,000-44,999</td>
<td>6.84</td>
<td>62.63</td>
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<tr>
<td>45,000-49,999</td>
<td>7.25</td>
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<td>50,000-54,999</td>
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<td>55,000-59,999</td>
<td>7.57</td>
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<tr>
<td>60,000-69,999</td>
<td>7.53</td>
<td>74.75</td>
</tr>
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<td>70,000-79,999</td>
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<td>77.54</td>
</tr>
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<td>80,000-89,999</td>
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<td>90,000-99,999</td>
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<td>100,000-149,999</td>
<td>8.00</td>
<td>84.86</td>
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<td>150,000-249,999</td>
<td>6.94</td>
<td>73.15</td>
</tr>
<tr>
<td>250,000+</td>
<td>5.06</td>
<td>55.25</td>
</tr>
</tbody>
</table>

Note: “Return” indicates a person filing an income tax return independently of whether he or she paid any income tax in respect of the 2012 taxation year. “Taxable return” indicates a person who has filed a return and paid income tax in respect of the 2012 taxation year.

across the country and let them increase the speed of transit and improve the schedule of buses. According to Munro, these two reasons are mentioned by 21 and 27 percent of households, respectively, as barriers to the use of public transit, while only 4 percent of households mention cost as a barrier.\(^\text{16}\) In spite of this potential gain in efficiency, governments may see a political benefit in the public transit tax credit that enters into their calculation to keep it.

\(^\text{16}\) Ibid., at 5.