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The “Demand Stabilization Mechanism”: Using Temporary GST Cuts as Automatic Fiscal Policy

Other countries have used temporary cuts to value-added taxes like the GST to help counter downturns with success. Should Canada follow suit? The authors propose a method and assess the challenges.

Robin Boadway and Thorsten Koepl



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THE STUDY IN BRIEF

The federal government will be increasingly constrained in its ability to provide effective stimulus in response to future severe cyclical economic downturns. Low interest rates restrict the Bank of Canada's ability to stimulate private demand through interest-rate cuts. Similarly, high public debt levels post-COVID restrict government's long-run capacity to provide discretionary fiscal stimulus.

Against this background, we propose a complementary fiscal policy measure to manage aggregate demand in Canada. This measure, which we call the "Demand Stabilization Mechanism" (DSM), would use temporary cuts in the goods and services tax (GST) to deliver timely, targeted and fiscally anchored stimulus for aggregate demand during economic downturns and recoveries.

Our proposed DSM would use a simple rule. When the economy's negative output gap (the difference between actual and potential GDP) is forecast to reach 2 percent or more sustained for four consecutive quarters, a temporary GST cut would kick in to stimulate demand for goods and services. The cut would initially remain in effect for four quarters, after which it could be extended depending on the state of the economy. Once the economy is on the recovery, the GST would resume at a higher level than before the cut to recoup lost revenues for the government over a set time period.

The DSM would have four key elements: 1) a *trigger* that determines when temporary tax cuts should be used; 2) a *rule* that determines the size and duration of the tax cuts; 3) a *fiscal anchor* that requires recovering the costs of the tax cuts; and 4) *legislation* that ensures the application, monitoring and auditing of the tax cuts.

To make the DSM operational, several challenges would need to be addressed. Firstly, the GST rate would need to be raised to provide enough room for a significant cut. Secondly, our proposal would rely heavily on the Bank of Canada's output gap forecast, which would need to be transparent, published sufficiently in advance, and be targeted to the application of the mechanism. Reliance on the Bank would require its continued protection against political interference. Thirdly, introducing the mechanism would require legislation through Parliament, which could raise constitutional questions.

Overall, the DSM would complement Canada's monetary policy by acting quickly to shore up demand, and the rule would protect Canadians' future living standards by being fiscally responsible. We hope that our provocative proposal marks a starting point for making fiscal policy more effective, while renewing the idea of a strong fiscal anchor that ensures a fiscally responsible government.

Policy Area: Fiscal and Tax Policy.

Related Topics: Role and Efficiency of Government.

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With the introduction of the inflation-targeting framework more than 30 years ago, the Bank of Canada took a firm lead in counteracting output fluctuations by adjusting nominal interest rates. This dominance of monetary policy has delivered macroeconomic stability for Canada for two very different reasons. First, interest-rate adjustments have moderated fluctuations in private demand for consumption and investment. Second, inflation targeting cemented the Bank's monetary independence and, as a by-product, led to an era of fiscal discipline in which inflation was no longer available to lower nominal public debt.

In the current environment, both these achievements are likely to be challenged. Low real interest rates have restricted the Bank of Canada's room to stimulate private demand through interest-rate cuts. Alternative policy measures such as quantitative easing or using negative interest rates are unlikely to deliver much additional support.¹ And extraordinary spending during the recent pandemic set a renewed emphasis in the 2021 federal budget on increasing deficits and debt without a clear fiscal anchor, casting doubt on the long-run availability of discretionary fiscal stimulus.

Against this background, we propose a complementary fiscal policy measure to manage

aggregate demand in Canada. This measure, which we call the "Demand Stabilization Mechanism" (DSM), would use temporary cuts in the goods and services tax (GST) to deliver timely, targeted and fiscally anchored stimulus for aggregate demand during economic downturns and recoveries. The DSM would have the following crucial features.

- it would be automatic, as it would be triggered by a forecast, of sustained deficiency in private aggregate demand;
- it would be timely and targeted, as a cut in the GST directly and immediately would increase aggregate demand; and
- it would be fiscally anchored, as any temporary

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1 The Bank of Canada has pointed out that purchases beyond about 50 percent of outstanding government debt would lead to market disruptions (see, for example, the comments made by Governor Macklem to the House of Commons Finance Committee on November 26, 2020). Negative interest rates are also limited by an "effective lower bound," thought to be around -0.5 percent for Canada (see Wittmer and Yang 2016). Moreover, the Bank has repeatedly emphasized that it currently has no intention of going below 0.25 percent.

Key Concept Explainer

Timely, Targeted and Anchored Fiscal Policy:

Our Demand Stabilization Mechanism establishes a simple rule that allows fiscal policy to react automatically to large recessions. A forecast of a sufficiently large negative output gap (shortfall of actual to potential GDP) triggers a significant, but temporary cut in the GST. This temporary cut increases demand for goods and services, thus providing the right stimulus at the right time for the economy. After that period, the GST would resume at higher-than-average level over a set time period to recoup lost revenues for the government. This ensures a fiscal anchor to keep government finances sustainable throughout the economic cycle. The mechanism would need to be legislated to ensure the application, monitoring and auditing of GST tax cuts and increases over time.

deficit and increase in debt caused by the tax cut would be recovered within a set horizon through subsequent increases in the GST.

Our proposal therefore addresses the two problems that currently constrain macroeconomic policy-makers: low real interest rates and extraordinary levels of public debt. Cutting value-added taxes would be more effective and more immediate than interest-rate adjustments. While requiring public budgets to be “intertemporally” balanced would not avoid unsustainable fiscal policies, it would eliminate slippage introduced under the veil of fiscal stimulus.²

The mechanism that we envision needs to be well designed in order to have a real chance to be legislated in Canada. In particular, there are three main practical considerations expressed in the form of questions, which we discuss in more detail throughout this *Commentary*:

- Would a DSM be consistent with the parliamentary prerogative to tax?

We see our mechanism as akin to a fiscal rule rather than as a change in taxation. There are other examples where fiscal policy reacts automatically to changes in the economy, and the DSM would be just another example.

- Would political interference negate the benefits of a DSM?

We regard political interference as unavoidable, since the mechanism would require increases in GST rates according to a predetermined repayment schedule. Our mechanism would try to minimize such interference by setting up a rule combined with a fiscal anchor that could be monitored publicly.

- How could a DSM be integrated into the current tax system?

We understand that our mechanism would require significant changes in the GST over time and an increase in the average GST rate. While changes in GST rates might have some costs for the economy, a long-run increase in the GST within the tax

² Other economists have also suggested using consumption taxes more prominently in the current environment. Smart (2021), for example, has advocated for a temporary GST cut to spur private demand in the post-pandemic economy; Tombe (2018) has floated the idea of a PST in Alberta to depend less on resource revenues.

system could also offer unique opportunities, such as tackling the vertical fiscal imbalance between the federal and provincial levels of government, addressing fiscal sustainability and adjusting the consumption-income tax mix.

In what follows, we first review some arguments for using consumption taxes to manage aggregate demand. We then provide details about how a DSM could be implemented as a legislated rule, before returning to a discussion of some of the challenges of implementing GST changes as automatic fiscal policy. To begin, Box 1 provides an overview of value-added taxes in Canada.

THE ECONOMICS AND POLITICS OF VARIATIONS IN A VALUE-ADDED TAX

Several countries have used temporary cuts in their VAT to support their economy during downturns. During the current pandemic, such a policy has been criticized as ineffective given that lockdowns and other restrictions curb private demand. More recently, however, the discussion has shifted to using temporary VAT cuts to spur a quick recovery from the pandemic. What are the advantages, then, of cutting a VAT temporarily?

First, VAT cuts are easy to implement. They can be announced and implemented immediately at the point of sale with little bureaucracy. Other stimulus measures either have a longer implementation lag (for example, income-tax changes) or require lengthy planning (for example, government spending on infrastructure projects). In that sense, VAT cuts feel like stimulus through a shovel-ready project.

Second, VAT cuts have a direct effect on aggregate demand, while other measures often suffer from low pass-through (for example, stimulus cheques) or rely on indirect channels to support demand (for example, the credit channel of monetary policy). More important, VAT cuts reach all households. They also tend to have a bigger impact on spending by low-income households, which have a high marginal propensity to consume.

In summary, VAT cuts offer the best bang for the buck as stimulus.

Third, VAT cuts tend to be associated with minimal distortions. Unlike stimulus spending, tax cuts do not crowd out private demand and investment. Indeed, VAT cuts might even provide an incentive for additional investment. Similarly, if the VAT cut is temporary, households are induced to bring their spending, especially for durable goods, forward in time. Hence, VAT cuts cause the “right” distortions to induce more aggregate demand.

Of course, all these arguments work exactly the same way when VAT rates are adjusted upwards again. This moves the policy instrument toward being an “automatic stabilizer.” Such stabilizers buffer the economy in a downturn, while putting a drag on it in an upturn, with the effect of smoothing out business cycles.

One criticism of VAT cuts is that they do not deliver any income support in an economic downturn. Other tools, however, are available – such as employment insurance and social transfers by the provinces – to provide basic income support in a recession and more generally. And, as the current pandemic has shown, if income support is really the problem, governments can react fairly quickly to provide such additional temporary support on a broad basis.

At the same time, lower-income households would be exposed to heightened risk in their consumption decisions as the VAT varies over the cycle. This issue could be addressed through the existing GST credit if necessary. For example, one can imagine the GST credit for low-income households being adjusted whenever the GST was increased above its long-run average value.

VAT adjustments also require a high degree of policy coordination, especially with monetary policy, an issue we return to in more detail below. In Canada, moreover, federalism adds another dimension: provincial budgets tend to be procyclical, especially when balanced-budget rules come into play. Ideally, GST changes at the federal

Box 1: Overview of VAT-Style Taxes in Canada

The goods and services tax, introduced on January 1, 1991, is a tax on any product or service in relation to the value added at each stage of production. Hence, the GST – save for its zero ratings and exemptions of food, health services, child care, and other goods and services – is equivalent to a tax on final consumption. The tax was set initially at 7 percent, but then was lowered in two steps, in 2006 and 2008, to its current level of 5 percent. In fiscal year 2019/20, the tax raised about 11.2 percent of total revenue for the federal government (Canada 2020a).

Five provinces levy combined provincial and federal value-added taxes in the form of a harmonized sales tax (HST), with the Quebec sales tax (QST) a de facto HST that follows GST principles. Manitoba, Saskatchewan and British Columbia run separate, single-stage provincial sales tax (PST) systems that are not aligned with the GST system (British Columbia briefly joined the HST system before reverting to a PST), while Alberta and the three territories have no sales taxes. HST is collected by the Canada Revenue Agency for both the federal government and the provinces, while the Quebec Revenue Agency collects the QST and GST in Quebec. The table below summarizes current provincial and territorial sales tax rates.

	PST	HST/QST	GST
	<i>(percent)</i>		
AB			5
BC	7		5
MB	7		5
NB		15	
NL		15	
NWT			5
NS		15	
NU			5
ON		13	
PEI		15	
QC		9.975	5
SK	6		5
YU			5

level should not be undone by offsetting changes at the provincial level to the HST, QST or PST. Given the provinces' fiscal autonomy, this would be difficult to achieve with 100 percent certainty, but the temporary nature and countercyclical features of a DSM would tend to mitigate the problem. Since the mechanism would involve initial reductions in the GST rate, provincial offsetting behaviour would involve increasing provincial tax rates in a recession, which would be politically challenging. Similarly, when GST rates were increased temporarily, the provinces would gain little from reducing their taxes, as the additional revenue raised from the increase in the GST would not pertain to them.

The major challenge of using VAT adjustments over the cycle is political, especially the need to increase VAT rates in an upturn. Tax increases are unpopular, and changing taxes usually causes political controversy. Indeed, independent monetary policy has a prime advantage in changing interest rates over the cycle without direct political complications. In Canada, this issue is compounded by the fact that the GST is not included in sticker prices but listed separately,³ making any changes to the tax quite visible to consumers. This feature would likely increase the salience of a VAT cut, making it a more powerful instrument in Canada than in countries where such taxes are included in quoted prices. Once the tax is cut, however, there is a risk that the cut would become permanent when the economy recovered. Hence, long-term primary deficits and debt accumulation could be a consequence unless tax increases were tied automatically to temporary cuts in the VAT. Indeed, the fact that the tax cuts would be part of a

temporary and automatic fiscal policy mechanism might serve to reduce resistance to VAT increases.

We conclude that variations in the GST could be a powerful countercyclical tool. To put this tool to work, however, would require solid implementation. How could this mechanism be designed so that political interference is minimized when invoking and revoking tax changes?

SETTING UP THE DEMAND STABILIZATION MECHANISM

Our mechanism would need to ensure that tax cuts are an automatic response to major economic downturns and are tied to a fiscal anchor. This leads us to several crucial design features. First, the mechanism needs to be based on a rule that leaves little discretion for policymakers about when and how to employ it; ideally, the rule should take into account other responses to the economic downturn. Second, the mechanism needs to be symmetric in the sense that any fiscal costs are to be recovered -over time. Third, the mechanism needs to be quantitative so that it is easy to monitor and to audit, thus ensuring transparency and accountability in its application. More specifically, we focus on the following four elements of a DSM:

- 1) a *trigger* that determines when temporary tax cuts should be used;
- 2) a *rule* that determines the size and duration of the tax cuts;
- 3) a *fiscal anchor* that requires recovering the costs of the tax cuts; and
- 4) *legislation* that ensures the application, monitoring and auditing of the tax cuts.

3 In the *Constitution Act*, 1867, provinces are restricted to using "direct taxes." To gain judicial acceptance of provincial sales taxes as direct taxes, provinces treat retail firms as tax collectors who impose sales taxes on consumers over and above the posted price. The federal GST is also a tax on consumers, and the federal government has chosen to adopt provincial practices in adding the GST to posted prices.

Trigger: Forecast of a Negative Output Gap of 2 Percent or More for at Least Four Quarters

Any trigger would need to be conditioned on a significant, fairly persistent drop in aggregate demand. The best instrument to proxy for such a scenario is the concept of a “negative output gap,” which measures a shortfall of actual output relative to the output an economy could achieve. This concept is not new: the Bank of Canada – like many other central banks – bases its interest-rate decisions on it at least partially.

Our mechanism would kick in as soon as an appropriately designed measure of the negative output gap was forecast to be severe enough – more than -2 percent – and to last initially for four quarters. Importantly, the mechanism could be triggered repeatedly, but once triggered, it would be limited to a specific period. If after this time, the forecast still showed a large enough output gap for the horizon of four quarters, the temporary cut would remain in place for another period, possibly at a different level.

Figure 1 shows a time series of the realized output gap as reported by the Bank of Canada over the past 40 years (Statistics Canada neither forecasts nor estimates such a measure). The blue line indicates a negative output gap of 2 percent. Based on these ex-post realized data, our mechanism would have been triggered five times: in 1982, 1991, 2009, 2016 and in the current pandemic. Hence, assuming accurate forecasts and the appropriateness of the measure for the output gap, our trigger would have picked out all recessions over this time. Importantly, there are periods where the output gap was negative, but less than the 2 percent that would trigger the DSM, so that the trigger would not seem to cause too much variability in the GST.

One complication is that, to ensure its timeliness, the trigger ideally would be based on a forecast of the output gap. The Bank of Canada not only reports realized output gaps for the past quarter (with short-term revisions for previous quarters), but also forecasts the output gap at a horizon of

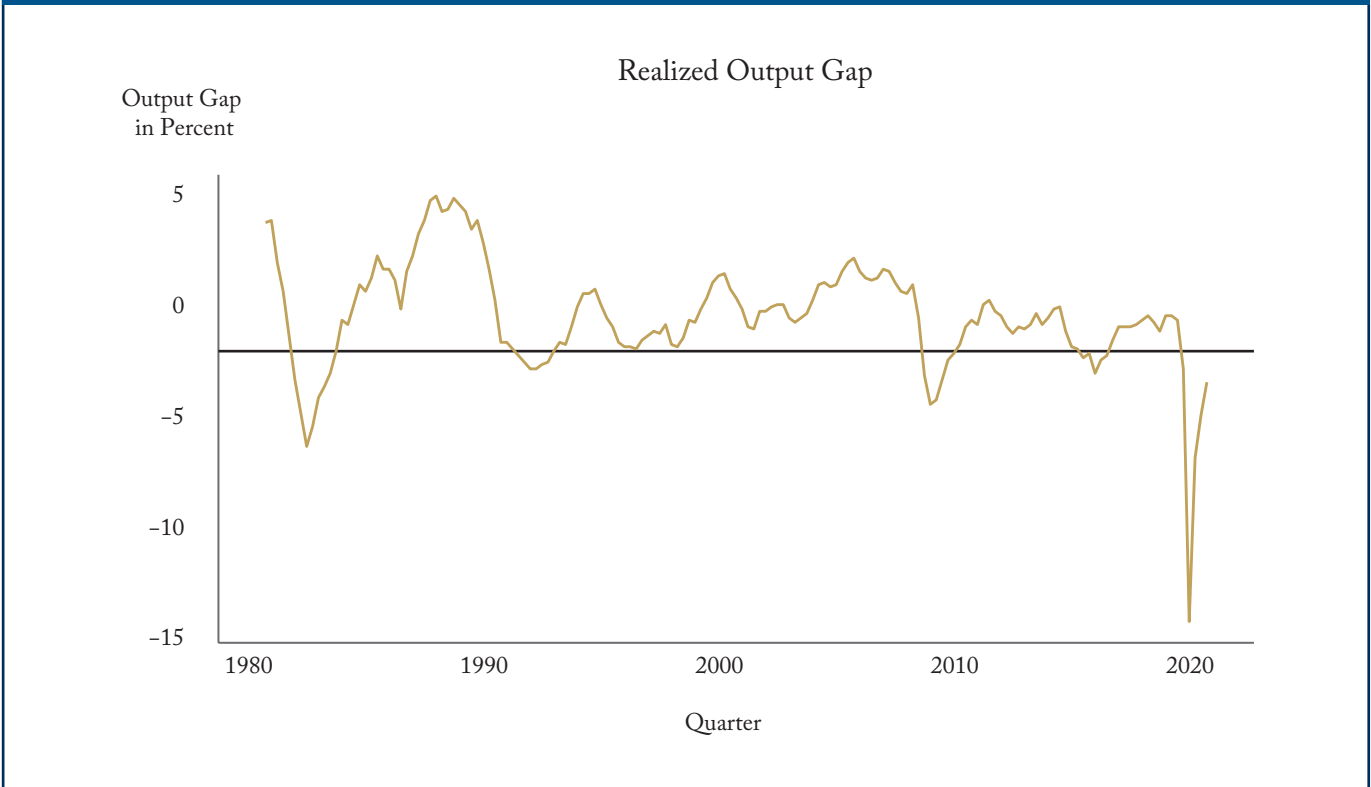
two calendar years ahead (eight quarters minimum). Currently, however, this forecast is not publicly available in real time, but only with a publication lag of five years; it should be made available once per quarter, as with the Bank’s Monetary Policy Report and its updates.

An additional advantage of using the Bank of Canada’s forecast for the output gap is that it can take into account the Bank’s expected policy stance over the forecast horizon, especially if the forecast is at least partially based on a formal, quantitative macroeconomic model. Similarly, the forecast can incorporate the impact of other fiscal stimulus measures, if known. To serve as a trigger, however, the forecast would need to hold the GST constant at its current level and not have other policy measures react to changes in the tax.

Figure 2 shows how a trigger based on a forecast would have worked in real time. The blue line uses a rolling forecast, meaning that we used data from the actual quarterly forecast for the output gap by the Bank of Canada. We applied our trigger to this time series of real-time forecasts for the period 1990–2015. For each quarter, this is the forecast output gap, averaged over the next four quarters. In this model, a temporary GST cut would have been triggered only twice prior to the pandemic: the first corresponds to the introduction of the inflation-targeting regime, which arguably is a transition period; the second coincides with the financial crisis of 2008–09. In the latter case, monetary policy hit the lower bound, and the Bank was struggling to provide additional stimulus. This incidence would be a prime example of where an automatic temporary GST cut would have been triggered in the third quarter of 2008. Also, not taking into account the effects of such a cut, the GST cut would have been renewed for an additional four quarters a year later.

For comparison, we conducted the same exercise using the latest available forecast published by the Bank of Canada. The methodology of conducting the forecast has changed considerably over time.

Figure 1: Realized Output Gap, Canada, 1980–2020



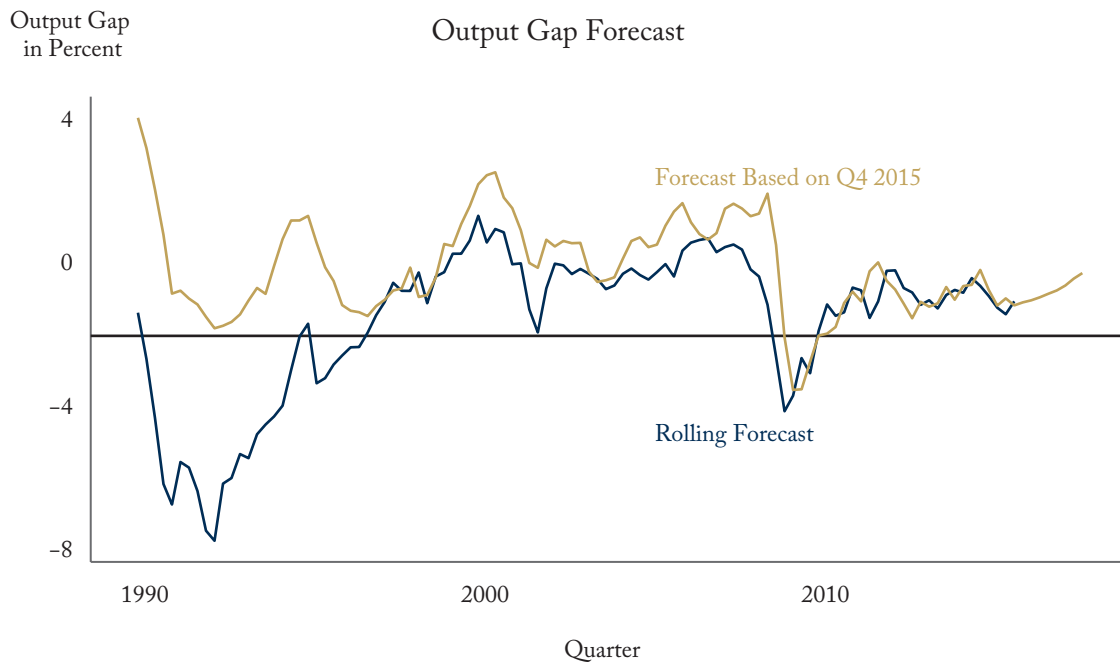
Source: Bank of Canada.

Hence, the Bank uses its current methodology – plus the additional data it has accumulated over time – to revisit its previous, real-time forecasts, since the latest available forecast is seen as the best model currently available for forecasting the output gap. The gold line in Figure 2 shows how our trigger would have fared using the updated, real-time forecast by the Bank, again averaged over four successive quarters. It shows that a temporary cut would have been used only once before 2015, but again in the context of a financial crisis, when interest rates for the first time hit the zero lower bound, albeit with a slight delay of two quarters. Also, the temporary cut in the GST would have been a one-time affair lasting only four quarters.

Rule: Reduce the GST for Four Quarters by 3 Percentage Points per 1 Percent Negative Output Gap

Once the trigger was hit, an automatic rule to reduce the GST would be activated. The rule would specify the size of the GST cut that would be implemented at the start of the next quarter. The time for the cut would be limited initially to four quarters, after which a review would take place along the lines we outline below. Such a timing would achieve faster delivery and ensure a short response lag for aggregate demand. Even though the cut might not have an immediate impact, aggregate demand would respond within four quarters due to its temporary nature. The response

Figure 2: Output Gap Forecasts, Canada, 1990-2017



Sources: Bank of Canada; authors' calculations.

thus would be considerably shorter than that of interest-rate cuts, which have an estimated lag of six to eight quarters.

The size of the cut would be based on a simple calculation that takes two steps. The first step is to estimate the pass-through of a GST cut on retail and wholesale prices for goods and services. The second step then would use the price elasticity of aggregate demand to arrive at the total change in tax that is required to remove the negative output gap. Our quantitative suggestion for the cut is based on some evidence from the United Kingdom and Germany, both of which have used temporary VAT cuts (Box 2).

Economists have a fairly good understanding of the pass-through associated with a cut in tax rates on consumption. First, a share of aggregate

consumer demand is exempt from GST or zero-rated such as food and beverages, children's clothes, books or financial and child care services. A conservative estimate based on Statistics Canada would peg these exemptions at 20–30 percent of total aggregate consumer demand. For this share, there is no direct effect of a GST cut. Second, for non-exempt goods and services the pass-through tends to be fairly large, even close to 100 percent. Hence, we arrive at 70 percent for the pass-through.

To come up with a price elasticity of aggregate demand is a daunting task. A possible approach would be to use calibrated values that are common in macroeconomic models. Since GST changes would be temporary and small in terms of lifetime income changes, we can rely on a pure, intertemporal substitution effect. Unfortunately,

Box 2: Experience with Temporary VAT Cuts in Other Countries

The literature on permanent changes in value-added taxes is quite large. Examples are the work by Benedek et al. (2020) on VAT changes in the eurozone and a study by Carbonnier (2007) on VAT changes for very specific sectors in France. Smart (2011) analyses the effects of introducing the HST and the concurrent increase of some prices in Ontario. All these studies point to the fact that the pass-through of a VAT is fairly large.

For temporary cuts of a VAT that are in the spirit of our proposal, two episodes stand out. In 2008, the United Kingdom temporarily reduced the VAT by 2.5 percentage points in response to the financial crisis. Blundell (2009) finds a pass-through of about 70 percent for the UK episode. This temporary cut is estimated to have increased aggregate demand by about 0.4 percent (see Crossley, Low, and Sleeman 2014). Hence, the price elasticity of aggregate demand was fairly low at about 0.25.

More recently, Germany cut its VAT by 3 percentage points for general goods and 2 percentage points for food and beverages in the wake of the COVID-19 crisis. These cuts have now expired. Fuest, Neumeier, and Peichl (2021) point out that the cuts were passed through almost completely to consumers, but also find that the more competitive the industry, the larger was the pass-through. Notwithstanding, only a small fraction of consumers increased their purchases, so that the cuts resulted in an increase of aggregate demand of only about 0.6 percent (Fuest, Neumeier, and Stöhlker 2021), which pegs the price elasticity of aggregate demand to changes in VAT in the range of 0.3–0.4. The results have to be interpreted with caution, however, due to the special nature of the shock associated with the pandemic.

there is little consensus on the value of the elasticity of intertemporal substitution among macroeconomists. A common solution is to set it simply to 1,⁴ but recent evidence based on financial markets data would peg it at a value much closer to 0.

Empirical evidence suggests a value below 0.5 (see the discussion in Box 2). Notwithstanding, we used a value of 0.5. This seems justified, since the symmetric nature of our mechanism – where its costs have to be recovered – implies an even larger incentive to shift demand forward in time. This

suggests that a 1 percentage point cut in the GST – which affects 70 percent of consumer goods and services – would increase aggregate consumption by about 0.35 percent. We would then need a three-percentage-point decline in the GST to roughly offset a negative output gap of 1 percent. Hence, the minimum cut implied by the rule would be 6 percent, which is higher than the current level of GST.

Using the proposed rule, what would a GST cut have looked like in 2008? To answer this question, we used the fourth quarter 2015 revised forecast

4 Note to macroeconomists: especially if the EIS is equivalent to the degree of relative risk aversion due to the assumed preference structure.

for the output gap from 2008 to 2010. The forecast pinned the expected average output gap over the next four quarters at -2.04 percent. Hence, the GST cut would have been 6 percent. Using the real-time rolling forecast for the third quarter of 2008, the cut would have been even larger, at 7.5 percent, and would have been renewed one year later at a higher level of 9 percent. Of course, this argument does not take into account that the GST cut would have reduced the forecast for the output gap. Notwithstanding, it demonstrates that a GST cut could last more than a year if a recession deepened over time.

Finally, it is worth emphasizing again that we do not need to adjust this rule further, for several reasons. First, as it based on a forecast, the rule has already taken into account the monetary stimulus that would be provided by interest-rate cuts. Second, the government likely would take into account the effects of the GST cut before providing extra stimulus. Third, possible multiplier effects would not apply, since we looked at aggregate consumption in the first place when using an estimate for its price elasticity. And fourth, private investment likely would also stabilize once the GST cut supported consumption.

Fiscal Anchor: Recover the Projected Loss in Tax Revenue over Five Years

The mechanism we propose would be “debt neutral” over time. Our thinking here is inspired by Germany’s *Schuldenbremse* (balanced budget requirement; see Box 3). During times of a GST cut, federal revenues would decline and, hence,

public expenditures likely would be financed by issuing additional debt. Our mechanism envisions that this extra debt plus interest would be recovered through future increases in the GST rate above its average level. Hence, the GST would finance the cut ex post by generating higher tax revenues, which would cover the cost of the cut.

A particular problem with repaying the cost of a temporary cut is that it could conflict with an election cycle, in which the incumbent government would have little incentive to recover debt before the election and thus might cancel or postpone repayment. Accordingly, it seems prudent for our demand stabilization mechanism to include a strong fiscal anchor.

Our mechanism thus would require that the tax losses associated with a temporary cut be recovered fully within five years of the cut’s expiration. Such a period would provide considerable flexibility for repayment in the midst of a recovery from a downturn, and be consistent with recovery times between different business cycles – for example, the past three cycles each lasted considerably longer than five years, according to the C.D. Howe Institute’s Business Cycle Council.⁵

In our mechanism, the instrument for recovering the shortfall in tax revenue would be a temporary GST increase beyond the long-run average. Once a cut took place, the mechanism would require the implementation of a repayment schedule based on GST rate increases over the five-year horizon. Relying on this horizon, a simple rule of thumb would be to increase the GST rate over its average level by one-fifth of the temporary cut per year the

5 The recessions are the double-dip recessions in the early 1980s, the introduction of the inflation-targeting regime in the early 1990s and the financial crisis of 2008. The Council does not classify the 2015 downturn as a recession.

cut was in effect.⁶ For example, starting out at the long-run average level of the GST, if the GST were cut by 10 percentage points, after one year the rate would increase by 12 percentage points for a five-year interval before dropping again by 2 percentage points to the tax's long-run average level. If the cut lasted two years, the increase would be 14 percentage points for five years before declining to the original long-run GST rate. Interestingly, the prospect of such a schedule of above-average GST rates in the future might even increase the impact of any cut on current aggregate demand.

Hence, our mechanism would tend to moderate business cycles by its very design. Appropriate stimulus alleviates an economic downturn in the first place, but also builds in some fiscal tightening in a recovery. The repayment plan would simply preclude discussions that a recovery would be dampened or threatened by an increase in the GST rate. In summary, the mechanism is thus symmetric by design, provides insurance against economic cycles across time and implements revenue-neutral stimulus over the cycle.

Implementation: Legislating, Monitoring and Auditing the Mechanism

Ideally, our mechanism would be fully legislated as an automatic rule administered by a federal administrative body, so that there would be no discretion in applying it. It seems natural to charge the Department of Finance with the execution of the mechanism, with the obligation to justify any cut and its size. Consequently, our mechanism would be put into place, legislated and regulated like other major fiscal programs, such as employment

insurance contribution adjustments, equalization payments and fiscal stabilization. One important difference, however, is that these programs are based on actual outcomes, while our mechanism would be based on a forecast of the output gap, allowing GST cuts to operate more quickly.

It would be important, then, to mandate a review of the mechanism's impact while the GST cut was in place. We propose that, after three quarters, the Department of Finance conduct and publish a formal review of the rule based on newly available forecasts. If a longer or larger stimulus were required according to the trigger and the rule, the GST cut could be adjusted accordingly and prolonged. If the conditions for the trigger were no longer in place, the GST cut would cease and the rate would have to be raised again to a higher level according to the fiscal anchor.

Further protection of the mechanism would require monitoring and auditing its rules-based approach. The Parliamentary Budget Office already has a mandate to provide oversight of fiscal measures, and the Auditor General's Office could be tasked with periodic audits of the mechanism. Of course, in principle, the problem would remain that the government could adjust the mechanism through legislation once the required increase in the GST rate was set to take place. Such political interference is a real concern, especially when considering the symmetric nature of the mechanism. It might be difficult to sell to the electorate that times of recovery are also times to pay for help in the past. Our belief is that the requirement to publish a repayment plan upfront might commit current and future governments.

6 An alternative could be to calculate an annuity that takes into account the current five-year borrowing rate for the government. However, this alternative calculation would not consider that aggregate consumption on average grows over time, with the nominal growth rate closely tied to the five-year interest rate. Hence, any interest-rate cost would tend to be compensated by the upward trend in aggregate consumption over time.

Box 3: Germany's *Schuldenbremse* and the 2020 VAT Cut: An Example of a Fiscal Anchor

Article 109 of the German constitution requires that both the federal government and the states conduct fiscal policy with balanced budgets (*Schuldenbremse*). The maximum yearly addition to debt is set at 0.35 percent of German gross domestic product for the federal government. Introducing the requirement was and still is not without controversy, but took full effect in 2016 after a brief phase-in following the financial crisis.

Under the rule, temporary deficits can still be run, for various reasons. First, during business cycles, debt can be accumulated as revenues fall and expenditures rise, but any debt accumulated needs to be repaid over time according to a fixed calculation. Hence, the balanced budget requirement can vary symmetrically over the cycle.

Second, the *Schuldenbremse* can be put on hold temporarily by parliamentary decision in cases of emergency. An explicit requirement for such a move is the formulation of a plan to retire additional debt over a reasonable amount of time.

Third, to account for fiscal uncertainty, some overshooting is allowed. Any overshoot is kept track of in the form of an “audit account,” where accumulated deficits up to a threshold of 1.5 percent of GDP can be kept before a repayment requirement kicks in.

In the current pandemic, Germany has run large deficits sanctioned by a temporary hold on the balanced budget requirements. The reduction of the VAT was part of the measures, and increased the federal debt by an estimated 20 billion euros. Debt accumulated in 2020 will be amortized according to a schedule between 2023 and 2042, and additional debt incurred in 2021 from 2026 to 2042. No specific fiscal instrument is required to pay off the accumulated debt. Using VAT increases could be an option, and would push the *Schuldenbremse* toward an automatic insurance mechanism against infrequent but large economic shocks.

CHALLENGES

To make the DSM operational, several challenges would need to be addressed. One is the current level of the GST. To be effective, the level of the GST on average needs to be much higher than its current 5 percent. In an extreme scenario, an output gap of 4–5 percent would require a reduction in the GST of about 12–15 percentage points, meaning that

the GST should be set at roughly that level. Hence, the overall level of consumption taxes would reach about 20 percent.⁷

Such a level for the GST would place Canada squarely at the average across all member countries of the Organization for Economic Co-operation and Development (OECD). Indeed, aside from the United States, which has no VAT, Canada has the lowest level of VAT among all OECD countries

7 A mechanism that uses both federal and provincial tax cuts would have more room to stimulate the economy. Such a mechanism, however, would need to be supported by the provinces. The prospect for such support is unclear, as some provinces currently do not even have a sales tax, and tax rates and tax systems vary across those that do have a sales tax.

and is the only one to have reduced its level since 2005 (see OECD 2020). Economic theory tells us that there are many reasons to prefer a higher share of revenues raised by a VAT than is currently the case in Canada. Most important, such taxes distort savings and investment decisions far less than income taxes. The GST, however, tends to be regressive: as lower-income groups tend to spend a higher proportion of their income, they also tend to face a higher tax burden from consumption taxes. To address such concerns, income taxes should remain a sizeable part of the tax mix.

To the extent that any baseline increase in GST rates would lead to an increase in government tax revenue, the extra revenue could be used to reduce federal debt, lower personal income taxes or support low-income households with a more generous GST credit.

Another interesting option would be to increase transfers, especially the Canada Health Transfer, to the provinces. This would address an important vertical fiscal imbalance in the federation that has been identified by the Parliamentary Budget Office (Canada 2020b) as well as the Council of the Federation (2021). The provinces would then be left with the decision how to react to the increased transfer. They could increase their spending, decide to make offsetting changes to their provincial sales tax – if they have one – or consolidate their fiscal position, which has become precarious for some provinces.⁸

A second concern arises from our proposal's heavy use of the output gap. The Bank of Canada forecasts this measure and, thus, would provide, at a minimum, technical support for the Department of Finance to run our mechanism. In the extreme, the Bank could “control” the mechanism through its forecast. This in itself would not be a problem, since it could ensure coordination between monetary

policy measures and fiscal action – after all, the Bank already takes into account policy measures, including its own stance, when forecasting the output gap. A more serious issue is here that the Bank could come under undue political pressure to trigger a GST cut by adjusting its forecast. This likelihood seems remote, however, as the Bank is independent in its policy decisions within the five-year window of its mandate.

A more serious problem is that the output gap is widely seen as an imperfect measure on which to base decisions. Forecasting actual output is already not without its challenges, but estimating potential growth often feels like a dark art. This might be the very reason the Bank of Canada does not publish its output gap forecasts in real time,⁹ but it does offer a growth projection in its Monetary Policy Reports and updates. This policy would have to change in order to introduce transparency into the application of the mechanism, and would force the Bank to make its forecasts of the output gap more prominent. Currently, the Bank reports several measures for the output gap, based on different methodologies for estimation, but it would need to produce a forecast targeted to the application of the mechanism.

In our opinion, there are no other measure that hold a clear advantage over the output gap forecast as the trigger. A potentially attractive alternative could be a measure of unemployment – variations in GST based on such data are certainly easier to communicate to the public and potentially require less judgment in their calculations. Our DSM would be triggered, however, only in a severe recession where communication would be less of a problem.

The main argument against using unemployment as a trigger is that it would not take into account supply shocks – or, more generally, shocks that

8 Hanniman (2018) argues that a stable transfer system by itself reduces vertical imbalances and increases the creditworthiness of subnational governments.

9 It does so with a lag of five years together with other measures forecast by its staff.

change the potential output for the economy. In other words, such a measure potentially would trigger the mechanism when the issue is supply, rather than demand, disturbances. Using the output gap, however, one potentially could account for such shocks as well. For example, the Bank of Canada in its July 2020 Monetary Policy Report outlines how it has tried to adjust the output gap for short-run changes in potential output due to pandemic lockdowns.¹⁰ Hence, it is conceivable that the Bank would increase its efforts toward providing a more accurate measure of the output gap once our mechanism was introduced. Such a well-designed measure could then also attempt to filter out supply disturbances so as not to add additional stimulus to demand when it was not warranted.¹¹

A final challenge is that introducing the mechanism would require legislation through Parliament. A serious issue here is that the mechanism might be in violation of the constitutional prerogative of Parliament to legislate changes in taxation and spending, since it would not be in a position to decide on changes in the GST rate triggered by the DSM. However, other fiscal mechanisms are already in place that react automatically to the state of the economy, including the Fiscal Stabilization Mechanism, the duration of employment insurance benefits and the indexation of tax brackets. Having the GST also react seems similar in nature to these other measures. In the event that such automatic changes in the GST were deemed to be unconstitutional, the DSM could still be enacted with the understanding that announced changes in the GST rate would have to be validated by subsequent legislation.

Since adjustments to the current GST and other fiscal instruments are needed, implementing a DSM would also necessitate a broader review of the current federal tax system. Indeed, one could take our proposal a step further and think more generally about a Debt Stabilization Mechanism where GST adjustments – this time upwards – provide an automatic adjustment to avoid increasing debt levels. Such a mechanism would allow the government to lever its advantage to smooth large, infrequent economic shocks across time without burdening future generations with high debt levels. A fiscal anchor formalized via such a broader mechanism should be a leading fiscal principle of any government.

CONCLUSION

In the current environment of low interest rates and high public debt, the federal government will be increasingly constrained in its ability to provide effective stimulus through either its monetary or its discretionary fiscal policies. The Demand Stabilization Mechanism we propose, by using temporary adjustments to the GST rate, would deliver timely, targeted and fiscally anchored stimulus for aggregate demand during economic downturns and recoveries. The DSM would complement Canada's monetary policy by acting quickly to shore up demand, and the rule would protect Canadians' future living standards by being fiscally responsible. We hope that our provocative proposal marks a starting point for making fiscal policy more effective, while renewing the idea of a strong fiscal anchor that ensures a fiscally responsible government.

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- 10 If one were to use the unemployment rate, to make similar adjustments one would have to estimate a “natural rate” of unemployment. At least theoretically, using the unemployment rate in relation to such a natural rate, rather than the output gap, would then amount basically to the same thing.
- 11 Another argument against using the unemployment rate is that it is a lagging indicator, while a forecast of the output gap is a leading indicator.

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