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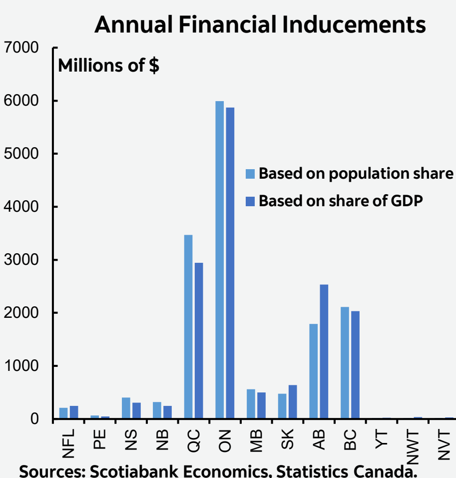
Chart 1



Sources: Scotiabank Economics, Statistics Canada.

Picking up the Twenties: A Simple Proposal to Reduce Interprovincial Trade Barriers*

- **Canada is an incomplete economic union. Wide-ranging and well-documented interprovincial trade barriers reduce our standard of living and limit our ability to live up to our economic potential.**
- **There is broad acknowledgement of this own-goal. Several studies have pointed to large economic gains from reducing barriers to interprovincial trade.**
- **Yet, despite some partial efforts to reduce barriers in the past, provinces have been reluctant to pursue further measures.**
- **We propose a simple mechanism to incentivize provinces to do what is ultimately in their own interest given the clear resistance to doing so: the federal government should provide substantial financial inducements for provinces to eliminate trade barriers.**
- **These inducements would be financed by the gains in federal revenues that would flow from the stronger growth unleashed by internal trade liberalization. Moreover, they would be in addition to increases in the provinces' own revenues.**
- **These inducements could be quite substantial. Roughly $15 billion in federal revenues could be generated annually using mid-range estimates of the economic impact estimated by Albrecht and Tombe (2016). Our proposal is to transfer all these revenues to provinces through an allocation mechanism linked to either population or economic size (chart 1). This would not be budget neutral in the early years as it would take some time for the full economic gains to be realized, but we consider an upfront payment necessary to overcome the political challenges to further liberalization at the provincial level. This would effectively be an investment in Canada.**

I. INTRODUCTION

Canada is an incomplete economic union. Wide-ranging interprovincial trade barriers limit our country's ability to live up to its economic potential. As we consider the post-pandemic world, and focus on building back better, these barriers will dampen the impact of reforms to increase our productive capacity and competitiveness, and limit opportunities to increase our standard of living.

The economic case for complete internal trade liberalization is compelling. Numerous studies point to large gains in economic activity from a reduction in internal trade barriers. And as former Bank of Canada Governor Poloz once noted in a panel discussion, interprovincial trade barriers are akin to finding a $20 bill on the ground and leaving it there. Fortunately, there is already agreement on the diagnosis of and the policies needed to correct many of these problems. Despite this consensus, however, progress towards effective solutions to them has been episodic and incomplete.

We believe this results in large part from a collective action problem, manifested in coordination failures across provinces and between the federal and provincial levels of government. In a sense, coordination failures are to be expected in a decentralized economic union such as Canada's, one characterized by diverse regional economies spanning vast geographic distances. But the fact that coordination failures exist does not justify complacency with respect to them. The persistence of such problems implies that opportunities for growth and employment are not being realized. More can and should be

* We would like to thank Robert Asselin from the Business Council of Canada for helpful comments.

done to exploit these opportunities and reap the benefits that would be unlocked. Doing so would help sustain Canadian prosperity in the face of external shocks and the challenges that climate change and an ageing population present.

This note takes coordination failures seriously and proposes a simple mechanism to resolve them. The approach proposed here does not rely on constitutional change or judicial reviews of federal-provincial powers, both of which are time-consuming and potentially divisive. Instead, we propose a simple and readily implementable solution: Recognizing that the benefits from lower trade barriers will accrue over time, we propose that the federal government provide financial inducements to provinces that liberalize. These incentives would be financed from the gains in economic activity that would result from liberalization, as government revenues rise with GDP. Depending on assumptions made with respect to the economic gains, these inducements could be sizeable. In effect, the federal government would pay provinces for doing what is ultimately in their interest.

It should not be this way, of course. It makes little sense to reward behaviour that is inherently beneficial to those undertaking the changes. Yet, as is clear from experience, there has been little appetite to pursue an aggressive dismantling of barriers to internal trade. Our hope is that an immediate and substantial financial reward provides the motivation that is required to overcome the range of obstacles to complete trade openness within our borders.

II. BENEFITS OF INTERNAL TRADE LIBERALIZATION

Deficiencies in the Canadian economic union have been exhaustively studied over the years. Parliamentary committees, business groups, academics, think tank commentators, and international organizations have identified a range of policy reforms to address economic challenges to Canada's prosperity.[1] The recommendations contained in a 2016 report by the *Standing Senate Committee on Banking, Commerce and Trade* are representative of such proposals (Table I). Reforms identified by this and other studies include tax changes to preserve the competitiveness of Canadian businesses; improvements to the regulatory approvals process; more robust competition laws and other measures to promote competition in critical network industries; the establishment of a national securities regulator; and efforts to streamline and accelerate critical infrastructure investments.

Table I. Standing Senate Committee Recommendations

Area	Proposal
Tax	Royal Commission on Taxation to improve the efficiency, simplicity and international competitiveness
	Reduce corporate income tax rate and temporarily allow full and immediate deduction of capital expenditures
Regulation	Improve regulatory regime to better balance competing interests and ensure project completion
Trade	Better protections for intellectual property; increased funding for research and development; expansion of Scientific Research and Experimental Development investment tax credit program
	Improve trade infrastructure, with particular emphasis on gateway transportation bottlenecks
	Encourage implementation of Beyond the Border Initiative
	Expedite trade with emerging, fast-growing economies; negotiate and implement free trade agreements beyond North America

Source: *Canada: Still Open for Business?* Report of the Standing Senate Committee on Banking, Trade and Commerce, October 2018.

One issue on which all agree is the need to reduce barriers to internal trade. This is a longstanding concern. Arguably, it goes back to the early days of Confederation and the introduction of Sir John A. MacDonald's National Policy, which sought to forge economic links between provinces by imposing external tariff barriers on US goods.[2] It has taken on added urgency in recent decades as Canada has pursued more open external trade through a succession of free trade agreements (FTAs) with its trading partners, starting with the United States. Trade liberalization can foster more efficient resource allocation, raising productivity and creating higher-paying jobs. But the full benefit of FTAs may not be realized because of restrictions on inter-provincial trade in goods and the mobility of workers. While tariffs on inter-provincial trade are expressly prohibited under the *Constitution Act*, a range of non-tariff barriers impede the efficient allocation of resources and

[1] See, for example, the Business Council of Canada taskforce on Canada's economic future.

[2] In so doing, it disrupted traditional North-South trade ties between the Maritime Provinces and the North-East US States. The resulting "de-industrialization" of New Brunswick and Nova Scotia was a source of lasting friction and resentment, particularly as the tariffs were viewed as support to manufacturing in Ontario and Quebec.

reduce productivity growth. Reducing these barriers could raise output, increase employment and generate the tax revenues that will be needed to deal with the challenges that lie ahead.

How much would output be raised?

Estimates of the impact of reducing internal trade barriers depend on the scope of reforms assumed to be implemented as well as the model used to assess the effects of reforms. Almost forty years ago, the *Royal Commission on the Economic Union and Development Prospects for Canada* (Macdonald Commission) calculated the cost of these barriers as 1.5 per cent of GDP annually.[3] Reforms since then (discussed below) likely reduced some costs, while the addition of new barriers increased others. In any event, as results from three recent studies suggest, the costs of barriers to internal trade remain significant (Table II). These estimates show large potential gains from reform. They are not directly comparable since they assume different levels of reform effort and employ different yardsticks to measure results. For example, the Bank of Canada estimate refers to an increase in the level of GDP, based on a 10 percent reduction in inter-provincial trade barriers. The International Monetary Fund (IMF) estimate, meanwhile, refers to GDP per capita and is based on elimination of all non-geographic internal trade costs.

Table II. Estimated Impact of Internal Trade Reform

Source	Impact	Based on:
Bank of Canada (2017)	0.6% level increase in GDP over three years	10 per cent reduction in inter-provincial trade barriers
IMF (2019)	3.8% increase in productivity ($90 billion per year)	Removal of internal trade barriers on goods
Albrecht and Tombe (2016)	3-7% increase in real GDP (equivalent to $50-$130 billion)	Elimination of trade cost asymmetries (3%); removal of all trade costs unrelated to distance (7%)

Despite the difficulty of comparing results, the estimates confirm large potential gains and that more ambitious reforms yield larger benefits. At one extreme, Albrecht and Tombe (2016) suggest the hypothetical elimination of *all* costs associated with inter-provincial trade, which the authors characterize as “an implausible but illustrative experiment,” would produce aggregate gains of 50 percent of GDP. To put it mildly, this outcome is not feasible as it includes the elimination of time and distance costs in addition to policy-induced distortions. Moreover, while some policy-related barriers to internal trade can be removed with relative ease, removing successive barriers would likely prove more difficult once “low-hanging fruit” is harvested. However, even against this extreme, their estimates remain attractive targets (Table II). Eliminating trade cost asymmetries between provinces results in aggregated gains of 3 percent of GDP; removing trade costs unrelated to distance would yield gains of nearly 7 percent. If realized, the mid-point of this range could generate additional revenues of roughly $15 billion, assuming federal revenues increase by 14 cents for every dollar increase in nominal GDP.

Past attempts to lower barriers

Given these potential gains, it is not surprising that efforts have been made to reduce barriers to internal trade. Two initiatives are noteworthy, the Agreement on Internal Trade (AIT) and the more recent Canadian Free Trade Agreement (CFTA).[4] Both initiatives sought to reduce barriers on internal trade, with limited progress.

The AIT was signed in 1995, following the 1994 North American Free Trade Agreement (NAFTA). Under its terms, the federal government, provinces and territories agreed “to reduce and eliminate, to the extent possible, barriers to the free movement of persons, goods, services and investments within Canada and to establish an open, efficient and stable domestic market.” Prior to the signing, internal trade measured by the sum of exports and imports between provinces and territories as a share of GDP had fallen steadily for more than a decade. This trend may be attributable to trade diversion and rapid increase in external trade following the negotiation of free trade agreements with the US (1989) and NAFTA.

[3] Crowley and Pallister (2018).

[4] These national initiatives are mirrored by several agreements among individual provinces. These agreements include: New Brunswick-Quebec agreement on labour mobility and skills recognition (2008); Partnership Agreement on Regulation and the Economy (PARE) between New Brunswick and Nova Scotia (2009); Ontario-Quebec Trade and Cooperation Agreement (TCA) to increase harmonization and labour mobility and improve dispute resolution (2009); New West Partnership Trade Agreement (NWPTA) between Alberta, British Columbia and Saskatchewan (2010), subsequently extended to Manitoba (2017); and Joint Regulatory and Service Effectiveness Office to improve the regulatory environment between New Brunswick and Nova Scotia (2015).

The AIT may have stemmed the decline in internal trade as a share of GDP. Yet, while the AIT was amended on several occasions to expand its scope, the final amendment being adopted in February 2015, trade policy experts and business groups nevertheless viewed the accord as inadequate. Too many barriers to internal trade remained intact, raising costs to consumers and eroding the international competitiveness of Canadian firms. In large part, this outcome was the effect of the positive list approach by which provinces agreed to specific measures specified in the accords. If individual barriers were not explicitly targeted for elimination, they remained.

In response to this unsatisfactory situation, in June 2016 the *Standing Senate Committee on Banking, Trade and Commerce* recommended renewal of the AIT on a negative exemption basis under which barriers not specifically preserved would be eliminated. The senate committee also recommended that the federal government seek a Supreme Court ruling on its authority to promote inter-provincial trade under *Section 121* of the *Constitution Act*. In the end, the committee got both.

In July 2017, federal, provincial and territorial governments reached a new agreement on internal trade—the CFTA. Consistent with the Senate report's recommendations, the new agreement was negotiated based on the negative list approach. While this constitutes an important improvement over the AIT, this feature of the accord has had limited impact: fully 133 of the CFTA's 340 pages are accounted for by listed exemptions. At the same time, there is reason to believe that the signatories were not necessarily imbued with the spirit of internal trade liberalization; a key motivation for the agreement was the fact that under government procurement provisions of the recently negotiated Canada-EU Comprehensive Economic and Trade Agreement, EU firms could have better access to the Canadian market than domestic companies.[5]

Subsequently, in a 2018 landmark case, the Supreme Court of Canada ruled on the provinces' right to maintain *de facto* barriers to inter-provincial trade [*R v. Comeau*, 2018 SCC 15]. The court upheld the prohibition on tariff and tariff-like restrictions under *Section 121*. However, the Supreme Court Justices also reaffirmed provincial powers to legislate in the interests of their citizens under *Section 92*. For a measure to be ruled invalid under *Section 121*, the court ruled, its primary purpose must be to restrict trade. In effect, provinces can maintain non-tariff barriers, provided those barriers can be shown to support a public policy purpose other than restricting inter-provincial trade.

The recent Supreme Court ruling thus seemingly precludes unilateral action on the part of the federal government to enhance the economic union by reducing internal barriers to trade. If Canadians are to enjoy the benefits of a more efficient union, a different approach must be found to addressing its deficiencies. As the Concluding Statement of 2019 IMF Article IV Review of Canada notes: "Barriers to domestic trade is a longstanding issue and nothing short of a sustained and concerted collective effort is needed to break down barriers that are impeding Canadian businesses from competing on a level playing field and scaling-up. A 'coalition of the willing' could be one way to accelerate progress."

III. RESOLVING COORDINATION FAILURES

The IMF's conclusion suggests that while the AIT and CFTA are positive steps on the path to strengthening the economic union, they do not go far enough. Enormous energy and effort have gone into identifying key policy reforms.[6] Unfortunately, past attempts to make meaningful progress have been blocked by coordination failures.

A proactive approach to reducing barriers to internal trade requires a clear understanding of the nature of the coordination failure that blocks reform. In our view, efforts to lower internal barriers are plagued by a potential collective action problem: even if all jurisdictions stand to benefit from free internal trade, any one province may nevertheless be reluctant to agree to the elimination of barriers, fearing the loss of sector-specific employment and tax revenues that liberalization might entail. The potential gains from internal trade liberalization are uncertain and lie in the future; the (largely political) costs are upfront and very certain. The problem is magnified by the possibility that others may renege on an agreement to liberalize internal trade such that a province suffers the disruption (and the political costs) of reform, without reaping the full benefits that had been promised. In these circumstances, the politically astute course is to wait. And if unanimity is required to move forward, mutually beneficial reforms are deferred such that all provinces are worse off relative to the case in which they lowered their barriers to internal trade.

This result is typical of problems involving the coordination of the actions of different agents. It is the basis for the ubiquitous "prisoner's dilemma" example used to explain coordination failures. The appendix applies this approach to the issue of inter-provincial trade barriers. In the case of internal trade, the cooperative outcome (*remove barriers*) is superior to the default (*maintain trade barriers*) but is not sustainable. The solution requires monitoring and enforcing the cooperative agreement. In theory, the federal government could perform

[5] This episode illustrates how external commitments can promote domestic reforms.
[6] On priorities for reform, see Dawson (2015).

this function under *Section 121*. In practice, the Supreme Court's ruling in *R v. Comeau* rules out that approach. Some other method must be found to assuage the collective action problem.

Our proposal is for the federal government to offer financial inducements conditional on the removal of trade barriers. The idea is straightforward: because the elimination of provincial barriers to internal trade would generate GDP gains that grow the federal (and provincial) governments' tax base, expected increases in revenues can be shared among jurisdictions agreeing to internal free trade.[7] These inducements would not affect Ottawa's fiscal position since such gains are presently unrealized, a policy akin to "leaving money on the table." However, to protect Ottawa's balance sheet, prudence dictates the use of conservative estimates with respect to expected growth effects from the elimination of inter-provincial barriers.

Several features of the scheme recommend it for consideration:

First, **the proposal avoids the time-bound nature and potential divisiveness of judicial reviews and constitutional changes**. Sustaining Canadian prosperity in the face of external shocks and the challenges of climate change and an ageing population requires timely action. Since participation in the proposed scheme would be voluntary, provinces are free to accept federal payments or not. Complicated, time-consuming negotiations would not be needed.

Second, **monitoring of the agreement could be "outsourced" to individual Canadians and firms**. Much like the practice in external trade agreements, firms and individual Canadians could be given the right to seek damages against provinces found to be in violation of their reform commitments, with claims paid out from transfers that would otherwise go to the offending jurisdiction.

Third, while maximal economic benefits would accrue with the participation of all provinces, **the scheme does not require unanimity among provinces, reducing possible disruption from non-participating jurisdictions**. Any approach that requires the unanimous consent of all provinces is subject to a hold-out externality in that the last province to agree to an arrangement can secure more favourable terms by withholding consent. Such opportunistic behaviour can maximize the gains for the hold-out province but at the cost of imperilling the potential benefits that would accrue to all provinces if the agreement were to go forward. Of course, less than complete provincial participation would limit the economic impact of liberalization and shrink the financial inducement available to participating provinces.

Fourth, **the proposal is scalable**. Not only could the plan go forward if some (small) provinces opt out, but payments could also be scaled to the ambition of the reform effort of participating jurisdictions. The federal and provincial governments could agree on a comprehensive set of measures that would deliver the largest possible growth dividend. Realistically, that may not be politically feasible; adoption of a more modest reform agenda, one that demonstrates the proof of concept, could build political momentum behind a more complete package of reforms. In the limit, Ottawa could prepare a "menu" of reforms from which to choose, each with an associated payment. The only critical requirements are that payments are conditional on reforms undertaken, and that it is possible to estimate the impact of those reforms on GDP.

Admittedly, the proposal could be subject to synergistic thresholds—certain reforms may require a minimum number of participants (or the participation of specific provinces) before they have an appreciable impact on output and thus the federal tax base. This is a weakness of the proposal that is discussed more fully below.

Another criticism of the proposal is its reliance on the credibility of the federal government's commitment to follow through with the promised payments. Provinces might be reluctant to participate in the scheme and undergo the potential disruption and political fallout associated with reforms if the federal government could balk once it came time to make the payments. While this is indeed an obstacle, it is not insurmountable. The credibility of federal transfers could be strengthened through binding legal agreements between Ottawa and the provinces that would be subject to judicial review and enforcement. Moreover, since the proposal is based on the realization of tax revenues that would otherwise be unavailable, there is little incentive for the federal government to renege on the agreement. Careful analysis of expected benefits from reforms and the use of prudent planning assumptions, such that increase in federal revenue is greater than contractual fiscal transfers, would further enhance the credibility of the scheme.

[7] Pallister and Crowley (2018) propose an alternative approach in which Ottawa and the provinces would agree on a charter of economic rights embodying internal free trade. In return for provincial cooperation, the federal government would guarantee long-term funding to the provinces in recognition of their responsibilities with respect to health care. They contend that Ottawa's assertion of an economic charter would be approved by the courts. That may or not be the case; regardless, negotiating such a charter would doubtless be time-consuming and could well be divisive as the definition of economic rights is debated. In our view, these considerations could prove to be critical impediments to their plan. That said, their plan to secure provincial agreement through long-term funding commitments is complementary to our approach (see discussion below).

How large might inducements be?

A key question is whether the provinces would participate. This would clearly depend on the size of expected side payments. As noted above, the size of federal transfers would be scaled to the reforms undertaken and their effect on output. By way of example, Table III shows illustrative revenue transfers by province and territory based on population and size of economy in 2018. We assume an incremental increase in GDP corresponding to the mid-point of the estimated range from the Albrecht and Tombe (2016) preferred scenario (Table II). This forms the revenue base that would not be available under the *status quo*. As a rough rule of thumb, we assume federal revenues increase by 14 cents for every dollar increase in GDP. This assumption results in a potential pool of funds of over $15 billion.

Table III. Illustrative Revenue Transfers and Provincial Fiscal Indicators

Jurisdiction	Revenue Transfer ($ millions) based on:		Budget Balance, 2022^f ($ millions)	Revenues, 2022^f ($ millions)
	Population	Size of Economy		
Newfoundland and Labrador	209	248	-587	8,518
PEI	67	48	-46	2,390
Nova Scotia	401	304	-218	11,782
New Brunswick	319	247	-296	10,381
Quebec	3,468	2,944	-5,547	122,567
Ontario	5,992	5,871	-19,600	154,000
Manitoba	557	498	-374	17,838
Saskatchewan	474	636	-1,685	14,478
Alberta	1,794	2,531	-3,277	43,697
British Columbia	2,109	2,032	-5,484	58,929

Source: Authors' calculations, Statistics Canada and Scotiabank Economics.
f=Scotiabank Economics forecast

This exercise is revealing, notwithstanding the fact it is purely hypothetical. It suggests that exploiting opportunities to improve the economic union—*ensuring money isn't left on the table*—could result in large transfers to the provinces. It bears noting, however, that the estimates above assume that reductions in internal trade barriers translate into higher outputs of goods and services. To the extent that this is not the case, these estimates would of course be overestimates. This consideration underscores the importance of careful design and implementation of the proposed scheme, especially in terms of estimating the potential impact on output of reducing barriers to internal trade.

A key issue is the basis on which side payments would be allocated. Population share is a logical candidate, one that would reinforce the principle of equality of opportunity across the Canadian federation. Provincial share of national output is another possible metric for allocating transfers. For Ontario and British Columbia, the differences in transfers based on the two measures are not that great. This is not the case with respect to other provinces and especially resource-rich jurisdictions, so careful consideration would have to be given to the choice of metric as well as the frequency for updating the transfer arrangements, particularly as the relative size of economies can be expected to shift over time.[8]

It should also be noted that the full realization of economic gains would of course materialize over time, hence the $15 billion would not immediately flow into federal coffers. We nevertheless believe it would be important for the federal government to offer the steady-state financial inducement as soon as liberalization occurs to help provinces manage the political challenges associated with reducing barriers. If this were done, the result would be a temporary increase in the federal deficit. Given the large economic payoffs to come, we consider this a sound use of the public purse.

[8] One option would be to have a blended weighting scheme that combines population and economic shares. At the same time, giving weight to size of economy would have beneficial political economy effects, as it provides incentives for sound economic management beyond internal trade liberalization.

Would the provinces and territories participate?

While such transfers are too large to dismiss out of hand, it is possible that some provinces might be reluctant to participate. Two factors are relevant here. First, bear in mind that, in addition to federal transfers, lowering inter-provincial trade barriers would benefit the provinces through increased employment and higher tax revenues. Albrecht and Tombe (2016) and the IMF (2019) both find that smaller, poorer provinces would gain disproportionately from internal trade liberalization. Enlightened self-interest would likely push them to participate in a scheme that would provide them with sizeable federal transfers. By the same token, however, larger provinces might be reluctant to participate if they stand to benefit to a lesser extent.

In this regard, the second—and possibly decisive—factor in determining provincial participation is the fiscal outlook for the federal and provincial governments. Prior to the COVID crisis, Parliamentary Budget Office long-term fiscal projections revealed dramatically different paths: the federal government's debt-to-GDP ratio declined steadily over time as the federal debt burden is gradually eliminated; in contrast, most provincial debt-to-GDP ratios were projected to rise steadily (unsustainably so in some cases). This divergence in debt paths reflects several drivers, including the highly decentralized nature of the Canadian federation, which assigns provinces the responsibility for health care, as well as the federal government's taxing power.[9] The extraordinary fiscal responses of both federal and provincial governments to the pandemic have altered the near-term profiles of debt burdens. Regardless, for provincial governments confronting increasingly onerous debt burdens and rising health care costs from an ageing population, the costs of not participating in the proposed scheme to reduce inter-provincial trade barriers may simply be too high. This applies equally to large provinces as well as smaller jurisdictions. In the case of Ontario, for instance, transfers would cover about one-third of the expected 2022 budget balance deficit. Notwithstanding the revenues and other benefits that individual provinces may obtain from barriers, they are unlikely to exceed the value of such *ongoing* transfers.

While we believe that the simplicity of the proposal is a key selling point, there are two caveats that should be noted. For example, in the design and implementation of the transfer scheme consideration should be given to complementary efforts to reduce interprovincial barriers. In particular, calls for provinces to leverage mutual recognition as a low-cost and efficient method for removing internal trade barriers have been growing over the last few years. Most recently, Premier Kenny recognized out-of-province professional credentials as a means to attract labour and talent into Alberta. In this respect, while a principal around mutual recognition can co-exist with the transfers proposed here, it would be important to ensure that transfers do not create incentives for some provinces to adopt a "wait and see" approach to determine the payment they would receive before they exercise mutual recognition as an option to remove trade barriers in part or in full.

In addition, it would be important for this approach to carve-out the supply management system as there is little political interest in altering the system. In the absence of a clear political consensus on reforms, efforts to include the supply management system would likely entail arduous and indeterminate negotiations that could derail other measures to reduce internal trade barriers.

IV. CONCLUSIONS

Future Canadians may come to view our response to the COVID pandemic as a watershed for the Canadian federation. The next few years can be a time in which national leaders address the fundamental challenges to the economic union. But it could also be a missed opportunity, in which the main political parties fail to engage in constructive debate on possible solutions to the challenges that threaten the continued prosperity of all Canadians in an increasingly uncertain world. Given these challenges, the need for thoughtful leadership on how to move the federation forward has rarely been greater.

Resolving the coordination failures that impede the efficient operation of the Canadian economic union is the starting point. The proposal advanced here to lower barriers to inter-provincial trade would raise output and generate revenues needed to address the long-term challenges Canada faces. Because it is based on the sharing of the dividends of higher growth, the scheme does not require lengthy and divisive negotiations between federal and provincial governments. The plan only requires political leadership.

[9] Mulligan (2017) shows that Canada is an outlier among members of the Organization of Economic Cooperation and Development in having the most decentralized federation.

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APPENDIX: COORDINATION FAILURES AND FEDERAL TRANSFERS

The coordination failure described above is illustrated in Figure I using a simple two-player coordination game ("Prisoner's Dilemma"). Each cell of the matrix shows the payoffs to the policy choices made by the two players—Province A and Province B.[10] The number in the upper right of each cell is the payoff to Province A; the corresponding number in the lower left of the cell is Province B's payoff. Both players are clearly better off relative to the *status quo* if they coordinate on the cooperative outcome and agree to remove barriers to inter-provincial trade. Unfortunately, that solution may not be sustainable.

Figure I. Two-player coordination game

		Province A	
		Remove	*Maintain*
Province B	*Remove Barriers*	15 15	20 5
	Maintain Barriers	5 20	10 10

To see this point, consider what happens if Province A removes its barriers to inter-provincial trade but Province B does not. The outcome is shown in the lower-left cell of Figure I. In this scenario, A is strictly worse off, having lost, say, revenues or other benefits from the removal of barriers, while B is better off. These results may require some intuition. It could be the case, for example, that the benefits of A's reforms are conditional on B likewise reforming, such that A's lost revenues are not offset by higher growth. Meanwhile, B benefits from A's reforms through more efficient production, say, while retaining revenues from non-tariff barriers. Given the symmetry of the game, the same situation applies if B removes its barriers and A does not, as described in the upper-right cell in Figure I. In this case, it is A that is strictly better off and B that is worse off.

The purpose of this exercise is to illustrate the kind of coordination failures that can block reforms beneficial to both players—not realism. In this regard, the key conclusion is that absent some means of binding the other player to the cooperative outcome in which each removes barriers to inter-provincial trade, both players have an incentive to assume that the other will maintain their barriers to internal trade. As a result, the game reverts to the *status quo* with both provinces left worse off—in other words, money is left on the table.

If the federal government had clear constitutional authority to prohibit non-tariff barriers to inter-provincial trade, or the provinces were to unanimously agree to a charter of economic rights, it could enforce a cooperative outcome to remove barriers in the game above. However, the Supreme Court ruling in respect of *R v. Comeau* does not provide that authority, while negotiations on a charter of economic rights would likely prove long, arduous, and possibly divisive. Our proposal to assuage coordination failures through federal transfers can be used to avoid these approaches and support internal trade liberalization. This scenario is shown in Figure II.

Figure II. Two-player coordination game and federal transfers

		Province A	
		Remove	*Maintain*
Province B	*Remove Barriers*	15+6 15+6	20 5+6
	Maintain Barriers	5+6 20	10 10

The set-up of the game is identical to Figure I except that federal payments in support of reforms are added. These transfers alter the payoffs available to the provinces such that it no longer pays to "defect" from a cooperative agreement to eliminate barriers to internal trade. This result reflects the fact that the most that a player could gain from this strategy is 20, whereas removing barriers generates a payoff of 21 (=15+6). This simple example illustrates how unilateral federal payments can be used to assuage coordination failures and improve the economic union.

[10] For simplicity, and to highlight the nature of the coordination failure, the two "players" are assumed to be identical. Similarly, a one-shot game is illustrated for clarity of exposition; allowing for repeated plays and increasing the number of players adds realism at the cost of introducing greater complexity. The simple game described by Figure I illustrates the key role of federal transfers in assuaging coordination failures.

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