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Canada's Trade Policy Options under Donald Trump:
NAFTA's rules of origin, Canada-U.S. security perimeter, and Canada's
geographical trade diversification opportunities

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Abstract

This paper analyses the trade policy options of Canada under Trump and reviews some arguments that have been made by economists and others in the current debate surrounding U.S. return to protectionism and mercantilism. For Canada, both imports and exports are vital, and trade with the U.S. and with the rest of the world is of key importance. The new mercantilist position of the U.S. administration under Trump requires Canada to reflect on how to communicate the Canada-U.S. trade relation in terms of win-win strategies. A good starting point for this exercise, however, is to emphasize that NAFTA, as a trade preferential arrangement, is not as valuable as it used to be in the 1990s because NAFTA margins of preferences are no more sufficiently attractive to offset the cost of complying with NAFTA Rules of Origins requirements. Second, Canada-U.S. border security measures introduced after the terrorist attacks of 2001 have also offset NAFTA's tariff preferences. Finally, the paper discusses the benefits of diversifying Canada's trade geographically in a world where North America has become a smaller share of the global pie.

JEL Classification: F10, F13, F14, F15, F16.

Résumé

Cet article analyse les options de politique commerciale du Canada dans le contexte de la Présidence Américaine de Trump, et examine quelques arguments qui ont été faits par des économistes et autres dans le débat actuel entourant le retour du protectionnisme et du mercantilisme aux États-Unis. Pour le Canada, les importations et les exportations sont essentielles, et le commerce avec les États-Unis et avec le reste du monde revêt une importance capitale. La nouvelle position mercantiliste de l'administration américaine oblige le Canada à réfléchir sur la façon de communiquer la relation commerciale entre le Canada et les États-Unis en termes de stratégies gagnant-gagnant. Un bon point de départ pour cet exercice, cependant, est de souligner que l'ALENA, en tant qu'accord commercial préférentiel, n'est plus aussi précieux qu'il ne l'était dans les années 1990, car les marges de préférences de l'ALENA ne sont plus suffisamment attractives pour compenser le coût de se conformer aux règles d'origine de l'ALENA. Deuxièmement, les mesures de sécurité à la frontière entre le Canada et les États-Unis introduites après les attentats terroristes de 2001 ont également compensé les préférences tarifaires de l'ALENA. Enfin, cet article traite des avantages de la diversification géographique du commerce du Canada dans un monde où l'Amérique du Nord est devenue une part plus petite de la tarte mondiale.

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1. Introduction

With the election of Donald Trump as U.S. president and his commitment to renegotiate the North American Free Trade Agreement (NAFTA) to U.S. best interests or else to withdraw from it, Canada's privileged access to the U.S. markets is at risk. This uncertainty generates concerns North (and South) of the U.S. borders. With 75 per cent of Canadian exports going to the United States, U.S. protectionism would be especially problematic for Canada. (See Figs. 1a-1h for trade data between U.S. and Canada and Mexico, and U.S. states trade with Canada.) Canadian softwood lumber, dairies and Canada's supply management system could become targets of U.S. protectionism lobbies.

Although the U.S. has had large trade deficits with Canada in the past, it is now returning towards balance (Fig. 1b) with a deficit of US\$ 15 billion in 2015. The U.S. trade balance with Mexico, however, shows large deficits of about US\$ 60 billion in average over the last 10 years (Fig. 1f). Fig. 1d shows how much Canada is dependent on the U.S., for both its exports (75% of Canadian export goes to the U.S.) and imports (more than 50% of Canadian import originates from the U.S.). However, Canada is also an important market for U.S. goods and services with 18% of total U.S. export going to Canada as shown in Fig. 1c (which also illustrates a slightly declining trend over time since the inception of NAFTA). It is also the first export market for about 35 U.S. States (see Fig 1.g and 1.h for U.S. States export, import, and trade balance with Canada.) Mexico has also progressively taken more importance in the share of U.S. world trade with 16% of total U.S. export going to Mexico (Fig. 1f) from below 10% at the start of NAFTA. Hence one third of overall U.S. export goes to Canada and Mexico, together, and one fourth of U.S. import originates from its NAFTA partners.

These data suggest that damaging the trade relationship between NAFTA partners would hurt Canada and Mexico. But U.S. also needs Canada and Mexico, whether it is for trade, integrated production, energy security and distribution, transportation, and security issues. Given the established continental supply chains, for many companies, an eventual U.S. withdrawal from NAFTA would imply to unwind long-term investments and losing access to cheaper labor in Mexico, a key element that permits North American firms to compete against low-cost producers in China and elsewhere. Further, because

NAFTA partners produce goods together in an integrated continental supply chain, Canadian and Mexican exports have a high share of U.S. content, so that imposing barriers on Canadian and Mexican exports would also penalize U.S. exports and lead to U.S. job loss.

Yet, for all of the benefits that NAFTA provided to its three member countries since its inception in January 1994, NAFTA appears out of line with some realities of how businesses operate. NAFTA rules of origin, labor and environmental standards, trade-related intellectual property rights, Investor-State dispute settlement arbitrations, and procurements rules are all in need of an update. The Canada-EU comprehensive economic and trade agreement (CETA) could serve as a very recent model for such renegotiations. Ironically, the Trans-Pacific Partnership (TPP) could also serve as an example, even if the U.S. have just pulled out of it. Modernizing NAFTA could advance Canada's interests in terms of trade in areas such as services and internet trade—areas that would also support U.S. jobs and innovation.

As exchanges with the new US administration develop, Canada will progressively have to establish a position on issues that need to be renegotiated and how it should be done, including the role, if any, of the Canadian Provinces in these negotiations. A good starting point for this exercise, however, is to emphasize that NAFTA, as a trade preferential arrangement, is not as valuable as it used to be in the 1990s. The reduction of the most-favored nations (MFN) tariffs at the WTO since the Uruguay Round has lowered NAFTA utilization rates (i.e., the percentage of Canadian firms that effectively request duty free preference when exporting to the U.S.) because NAFTA margins of preferences are no more sufficiently attractive to offset the cost of complying with NAFTA Rules of Origins (ROO) requirements. Also the U.S. has now free trade agreements with 20 countries (including Australia, Korea, and many countries from Central and South America). Of course, as preferential treatments are extended to other countries, the very concept of 'preference' is diluted. Second, Canada-U.S. border security measures introduced after the terrorist attacks of 2001 have also offset NAFTA's tariff preferences. Finally, even in the case of a U.S. withdrawal from NAFTA, U.S. would remain in the WTO and a high level of trade would continue among North American partners at MFN tariffs, or, even more provocatively, despite MFN tariffs. One obvious reason is that NAFTA has never been trade 'diverting' because geography makes Canada, the

U.S., and Mexico natural trade partners. Another reason is that NAFTA created the incentives for additional trade flows and investment patterns so that firms took benefit of a manufacturing process that made the most of the production advantages that each country had to offer. The auto industry, in particular, operates within a continental supply chain and cars bought in the U.S. include parts and labor from all three countries. The U.S. and Canada tend to produce engines, transmissions, and gearboxes and Mexico produces relatively more labor intensive parts such as seats and dashboards (Melitz, 2017). Although this process would not be irreversible in case of extremely protectionist U.S. measures, some degree of hysteresis should however be expected, even if the U.S. pulled out of NAFTA. Finally, Mr. Trump's threat of imposing a 20-35% tariff on goods manufactured in (former) NAFTA partners is, in most cases, not credible, unless U.S. also withdrew from the WTO, which is an unlikely scenario.

These facts should provide the needed lever to Canadian negotiators to power up their bargaining position in the forthcoming negotiations while enhancing Canada's privileged access to the U.S markets. Furthermore, if faced with a choice between a globally oriented policy and one that has its primary focus on continuing efforts to harmonize policies with those in the U.S., the decision is obvious given that North America is destined to be a smaller share of the global pie. Hence, Canada must continue diversifying its geographical trade pattern. From this perspective CETA, is a helpful strategic move. However, there may also be economic benefits to Canada of diversifying some of its trade towards countries with rapid economic and demographic growth which are emerging as dynamic producers and major consumer markets (including energy markets), in the 21st century. This would also help Canada to participate directly into global supply chains of production.

This paper reassesses some of these issues. Section 2 discusses the erosion of NAFTA's benefits because margins of preference are no more sufficiently attractive to offset the cost of complying with ROO requirements. Section 3 discusses the offsetting of NAFTA's benefits due to enhanced security measures introduced at the Canada-U.S. border after the 2001 terrorist attacks. Section 4 discusses the benefits of diversifying Canada's trade geographically in a world where North America has become a smaller share of the global pie. Finally, Section 5 concludes.

2. Rules of Origin and Erosion of Tariff Preferences under NAFTA

A Free Trade Agreement (such as NAFTA) is made up of a number of countries that agree to eliminate all customs duties (i.e., tariffs) among themselves or at least, to grant themselves a preferential tariff treatment. Members of a FTA generally retain their individual trade and external tariff policies with respect to non-member states. This gives an opportunity for a non-member that plans to export a good to the high external tariff country, to first transit through the low-external tariff one and then transship, with preferential treatment, to the final destination. Such redirection of trade to take advantage of the differential in the external tariff of members of a FTA is called trade deflection. All FTAs have rules of origin (ROO) which are designed to confine the benefits of the preferential tariff treatment to products originating in the member countries, i.e., to products manufactured wholly or substantially within the FTA. Therefore, ROO eliminate trade deflection because goods that are simply being transshipped or undergoing only minor transformations in a member country will not be deemed originating and will not receive preferential treatment when re-exported to another member country.

The principle for determining originating status is that substantial transformation has taken place in the exporting country. In NAFTA, this can be assessed using one of three tests or a combination of them. These are known as the change in tariff classification (CTC), the value content (VC) or the specific production process (SPP). The CTC criterion is the most commonly used of all NAFTA's ROO criteria for goods.¹ Chapter 4 and Annex 401 of the NAFTA agreement contains about 200 pages dealing with ROO and the interpretation of these rules as they apply to particular products.

¹ According to the CTC test, goods produced in one or more of the three countries with non-originating materials may be "freely traded" (i.e., exempted from tariff) when, after the manufacturing process, all such materials (excepting a *de minimis* amount) undergo a change in tariff classification based upon the Harmonized Tariff System (HTS). According to the VC test, some goods must also contain a minimum regional value content – defined as the difference between the transaction value of a good minus the value of non-originating materials – which, when expressed as a percentage must be at least 60 percent in order to "free trade" the goods under NAFTA. Alternatively, there is also a net cost value method because manipulation of prices in transfers among corporate affiliates might otherwise take advantage of NAFTA's transaction value method. In this case, the relevant percentage is 50%. Finally, the SPP criterion specifies that for some goods there might be a particular production process that must be employed.

Beyond the administrative and paper work costs due to these ROO, academic literature has shown that ROO, while they eliminate trade deflection, also distort trade flows and reduce efficiencies in the production process. For example, preferential ROO have a distortionary impact when they induce firms to substitute cheaper non-originating materials for intermediary goods originating from the zone in order to obtain the preferential tariff when exporting to the other member. Many studies have shown that ROO lead to trade diversion, substitution among inputs, differential effects on intermediaries versus final goods, implicit export subsidies from highly protective FTA members to other FTA members, rent shifting to FTA member firms from non-member firms, implicit tax on foreign intermediaries and implicit subsidies to capital, labor and intermediaries purchased within the FTA zone.²

Some researchers (Kunimoto and Sawchuk 2005; Ghosh and Rao 2005; Pastor 2008; Georges 2008b and 2010) have suggested that one option to dispense with ROO is to transform FTAs into customs unions (CU). Indeed, whereas a FTA requires preferential ROO to prevent trade deflection, a 'full' CU does not. In fact, a CU requires the negotiation of a common external tariff (CET) with respect to non-members; a revenue sharing agreement for the customs duties collected at the external border; and harmonized external trade policies. By getting rid of the differential in the external tariff with respect to non-members, the CET eliminates *de facto* trade deflection and thus removes the economic rationale for ROO. Thus, preferential ROO are typically absent from a CU arrangement and movements of goods within a CU are not based on their 'originating status' but on the principle of 'free circulation'.³

A relevant issue is therefore to ask whether it would be worth to negotiate a transformation of NAFTA into a CU. Gauging the impact of moving from NAFTA to a CU requires estimating the joint effect of adopting a CET and eliminating ROO, which can (roughly) be decomposed into two effects: (1) the pure effect derived from the adoption of a CET, and (2) the pure effect derived from the elimination of

² See for example, among others, Krueger (1993); Lloyd (1993); Krueger (1995); Krishna and Krueger (1995); Lopez-de Silanes et al. (1996); Falvey and Reed (2002); Carrère and de Melo (2004); Krishna (2005); Thoenig and Verdier (2006); Cadot, et al. (2006); Georges (2008a; 2008b; and 2010).

³ The European Union (EU), in principle, does not impose preferential ROO among its members (as it is also a CU). Of course, it does have ROO regimes with countries external to the union and which have signed FTAs with the EU.

ROO – which requires estimating their costs.⁴ ROO imply complex interconnections between the use of primary factors of production, intermediaries and final goods, and previous econometric studies do not seem to be able to deal appropriately with these complexities, nor to gauge the impact that these rules, or their liberalization under specific trade scenarios, might have on economic welfare or GDP.⁵ Given these complexities, a general equilibrium model appears a useful framework. Such a model is built in Georges (2008b) to gauge the impact of moving from NAFTA to a CU that also liberalizes ROO. The model itself is a multi-country multi sector dynamic general equilibrium model in which the world economy consists of seven countries/regions composing two blocks, NAFTA countries (Canada, U.S., and Mexico) and non-NAFTA countries (Latin America, Mercosur, Europe, and the Rest of the World). Each country has eight sectors of production (agriculture, resource sector, food processing, textiles and clothing, manufactures excluding machinery and equipment, machinery and equipment, automotives, and services).

In terms of modelling, the two key issues are related to the CET to be adopted among members and to gauge the cost of ROO. First, the CET has been set, in the model, equal to the U.S. MFN tariff in order to avoid protracted negotiations with the U.S. on the CET.⁶ As for ROO, the modelling approach is based on the fact that a ROO acts as an implicit tax to NAFTA firms for the use of non-originating intermediaries but an implicit subsidy for the use of capital, labour and intermediaries purchased within NAFTA (see Georges 2008a, for a mathematical approach to this problem and Georges 2010, for a graphical presentation). Therefore, the main impact of removing ROO is the elimination of the implicit subsidies and taxes. This shock reallocates efficiently the demand for factors of production in each sector

⁴ Since the work of Estevadeordal (2000), the econometric literature on ROO has typically coded an index of *ex ante* ROO restrictiveness as an independent variable in order to estimate the economic impact of these rules on bilateral trade flows, tariff preference utilization rates, and on investment flows. See for example econometrics studies by Estevadeordal and Suominen (2008); Cadot, Estevadeordal and Suwa-Eisenmann (2006); Carrère and de Melo (2004); Kunimoto and Sawchuk (2005); Estevadeordal, Lopez-Cordova and Suominen (2008).

⁵ Furthermore, there is the complexity that the use of preferential access in a FTA (and the concomitant ROO compliance) is an option, not an obligation, so that Estevadeordal's index of *ex ante* ROO restriction is less relevant than the *ex post* restrictiveness, or efficiency cost, of these rules.

⁶ Even a CET set equal to the U.S. MFN is likely to generate much lobbying, negotiation, and opposition. Industries where Canadian or Mexican MFN tariffs have to be reduced to U.S. levels are likely to oppose such a move. Furthermore, foreigners are likely to oppose the (less common) cases of upward adjustment of Canadian or Mexican external tariffs to U.S. levels, which would violate article 24 of the WTO (in cases *actual* external tariffs are at their WTO *bound* levels) and trigger retaliation or require compensation.

of NAFTA countries, lowering NAFTA firms' demand for capital, labour, and NAFTA intermediary goods, but increasing the demand for non-NAFTA intermediary goods. The efficient reallocation of factors of production within NAFTA will also lower the unit cost of production in every sector of NAFTA countries.⁷

Using this modelling approach Georges (2010) compares two counterfactual scenarios: (1) The benefit that Canada would have obtained if they had moved to a CU with the U.S. in the 1990s (instead of NAFTA); (2) The impact of moving to a CU at the start of the 2000s. Fig. 2 provides results estimated in the study for both cases and decomposes the sources of the gains into CET and ROO effects of adopting a CU.⁸ Fig. 2 illustrates that the gain for Canada of a CU in the 1990s would have amounted to a (permanent, i.e., each year) 1% increase in real Canadian GDP (on top of the gain generated by NAFTA), most of it originating in the elimination of ROO. We see, however, that these additional gains from a CU have been falling over time: the extra gain for Canada of moving to a CU in the early 2000s would have only amounted to a (permanent) 0.5% increase in real Canadian GDP. Furthermore, the gains resulting from the prospect to remove ROO have fallen from 0.7% of GDP in the 1990s to 0.4% of GDP in the 2000s.

As argued in Georges (2010), one reason for this reduction in the additional gains of adopting a CU is that NAFTA tariff preferences have been eroded since the phasing in of the Uruguay Round measures and the reduction of MFN tariffs.⁹ Therefore, NAFTA utilization rates (i.e., the percentage of firms that effectively ask for tariff preference when exporting to another NAFTA country) have also

⁷ Note that moving from NAFTA to a CU is not necessarily welfare improving according to the general principle known as the theory of the second best which states that, in a system with several distortions, the removal of any one of them cannot be presumed to be welfare-improving. Indeed, Georges (2008a) shows that NAFTA countries might potentially suffer from a terms of trade deterioration because the additional demand for non-NAFTA intermediaries will increase the international price of these goods. This suggests an analogy with the theory on optimal tariff and reflects that North American firms altogether constitute a significant share of the world demand for intermediary goods and hence have the potential to affect world prices. Thus the net effect of the removal of NAFTA ROO on welfare is ambiguous and is an empirical issue.

⁸ The full impact of adopting a CU also includes "cross effects". The removal of NAFTA ROO *per se* modifies trade patterns between NAFTA and non-NAFTA countries. Therefore, second-order effects measure the impact that the adoption of a CET might also have on the new pattern of trade due to ROO removal, with repercussions on all variables in the model. As these cross effects are relatively small, we will not discuss them further.

⁹ See Kunimoto and Sawchuk (2005) for a similar argument on NAFTA tariff preference erosion.

fallen because NAFTA margin of preference might no more be sufficiently attractive to offset the cost of complying with ROO requirements. But if firms apply less often for preferential treatment, then this implies two things: 1. the beneficial trade creation effect among NAFTA members has been shrinking; 2. exporters comply less with ROO so that the trade diversion effect of ROO has also fallen. This second point means that the *ex post* restrictiveness of ROO has decreased even with unchanged *ex ante* restrictiveness (i.e., these rules, in essence, have not been modified in the NAFTA Treaty during the period). Not only NAFTA's benefits have been cut but so are the potential gains of a CU eroded, through ROO elimination. Tariff preferences are relative to MFN tariffs. If these preferences fall to zero, any preferential trade arrangement (FTA or CU) is worthless.¹⁰ Note also that U.S. have extended preferences to other countries through ratification of new FTAs since NAFTA, so that many other countries have now access to these same (shrinking) preferences. This means that Canada's 'preferential' treatment is not preferential anymore when compared to other U.S trade partners.

That the potential gains of a CU have lowered suggests that elimination of ROO through adoption of a CU will likely be dismissed in NAFTA re-negotiations. Yet, the U.S. will likely push for a renegotiation of preferential NAFTA ROO. On the one hand, this seems to be a paradox that the U.S., which is the country with the lowest MFN tariffs in NAFTA, also insists on strict ROO. Of course, with low MFN tariffs and lax ROO, they would benefit of additional tariff revenues from trade deflection. On the other hand, however, ROO in FTAs are often the results of rent-seeking activities by interest groups instead of a genuine concern with trade deflection. U.S. trade negotiators have consistently looked for particularized benefits they could offer important industries in exchange for their support into backing NAFTA and other FTAs (Destler, 2006). Recall for example that a ROO coupled with a tariff preference

¹⁰ Indeed, this is a point that Bhagwati (2008) strongly emphasizes as a way to eliminate what he views as negative discriminatory effects of FTAs around the world. If countries cannot do much about existing FTAs directly, they can virtually eliminate FTAs by reducing MFN tariffs to zero so that preferences also fall to zero. In this case, any 'preferential' arrangement (FTAs or CUs) becomes, by definition, a wasting asset, and the economic gain (essentially due to ROO elimination) for moving away from a (now, worthless) FTA to a (worthless) CU is also equal to zero. The reduced gain from moving to a North American CU in the 2000's versus the 1990's, as is illustrated in Fig. 2, reflects this phenomenon as MFN tariffs have been reduced.

will provide an incentive to a Canadian firm to export to the U.S. a final product that uses intermediary goods produced in the U.S. Cross-border or within nations coalitions backing duty-free access in exchange for strict ROO have probably been the leading factor behind the success of FTAs negotiations during the 1990s and 2000s.¹¹ This game will continue under any NAFTA renegotiations because ROO remain an ideal instrument to meet the needs of industries that look for ways to gain advantage within the paradigm of free trade and value chains. The implication seems that these groups will inevitably lobby against ROO liberalisation, and therefore, against any agenda for a North America CU that would make ROO redundant. But they will also lobby against any withdrawal of the U.S. from NAFTA because this would also imply the elimination of these ROO that have been advantageous to them.

In this case, Canada needs to develop a strategy that ensures a greater consistency between NAFTA and CETA ROO, to avoid two separate sets of production schemes whenever firms seek preferential treatments (one when Canadian firms export to EU and one when they export to the U.S.). This could be a process similar to the 1997 pan-European “diagonal cumulation” system implemented by the EU with respect to its numerous FTAs.

More fundamentally, perhaps, the problem of assigning origin to only one country has become quite difficult as many goods are produced in stages with different stages located in different countries (i.e, ‘international supply chains’). In such a case, the origin of traded goods becomes ambiguous as the value added is split between factors owned by residents of a series of countries (Lloyd 1993).¹² This

¹¹ Coalitions can be cross-border or within nations coalitions and typically between intermediary sectors and final good producers. Baldwin (2009) citing Ravenhill (2008) provides the following example. Mexican tomato paste producers may lobby for tomato ketchup to be included in the Mexican list of duty-free goods if this gives a tariff preference to U.S. ketchup producers that is sufficiently large to induce them to fulfill the ROO by switching from cheaper Chilean to Mexican tomato paste. The gain for Mexicans is a new export market for their tomato paste, while the U.S. ketchup producers can export duty free to Mexico. Even Mexican ketchup producers who have traditionally used (protected) Mexican tomato paste (and therefore who are already satisfying ROO), might tolerate the inclusion of ketchup in the Mexican duty free list even if they are likely to lose from tariff removal, because a strict ROO will raise the costs of their U.S. rivals more than their own.

¹² An interesting proposal for reforming ROO was advanced by Lloyd (1993, 2002). Traditional ROO assign origin to only one country, that is, origin is treated as an all-or-nothing concept. However multiple countries typically contribute to the value added of the traded goods. Hence, instead of searching for a single-originating country we need a criterion which allows for multiple-originating countries. This led Lloyd to recommend eliminating existing ROO in FTAs and substitute them for a tariff rate that would be a weighted average of preferential and MFN tariff

reality implies that ROO, as they are currently designed, may now prevent NAFTAs firms from taking advantage of a true global production chains.

The objective of this section was to underline that the economic benefits of NAFTA *per se* have been eroded (even if, of course, Canada's trade with the U.S. remains vital for Canada and many U.S. states). In the next section we see that this erosion has been aggravated by the security measures at the Canada-U.S. border that were introduced after the 9/11 2001 terrorist attacks. If Canada was able to propose a security deal in the form of a North American 'security perimeter' in exchange for a Canada-U.S. Custom Union, the ensuing potential gains to the U.S. could induce economic and political lobbying activities in the U.S. to counterbalance the ROO lobbies in the U.S. that will insist on stricter ROO in exchange of supporting U.S. staying in NAFTA. This issue is reviewed in Section 3.

3. Post-2001 Border Security Measures and the Offsetting of NAFTA's Benefits

Canada's trade with the U.S. has been largely affected by the enhanced security measures imposed at the Canada-U.S. border to 'secure' the movement of goods and people since the terrorist attacks of September 11, 2001 (9/11) terrorist attacks. Mitigating measures at the Canada-U.S. border, such as trusted shipper and trusted traveller programs have not been very successful due to the high (fixed) cost of participation and the limited benefit.¹³ Even when taking these programs into account, many economists claim that post 9/11 security measures have contributed to a 'thickening' of the Canada-U.S. border and a slowing, if not a reversal, of the North American economic integration and trade flows (e.g., Goldfarb and Robson, 2003; Grady, 2009; Globerman and Storer, 2008, 2009; Nguyen and Wigle, 2009, 2011).

rates with the weights given by the value added originating from the preferential and the MFN sources. Therefore, the actual tariff rate levied would increase with the proportion of the value which was added outside the area, and would shrink to zero if value added was entirely from the FTA.¹² According to Lloyd (2002), "compared to the value-added tariff, any ROO which classifies a commodity as wholly produced within the area or outside the area will wrongly exclude some output (= value added) of one member from being freely traded with other members when the area content is less than specified by the VC criterion of the ROO. It will also wrongly admit with no tariff into a member country commodities which satisfy the arbitrary ROO but contain significant components and other value added in third countries". The main disadvantage of the method is the difficulty for most people of accepting an entirely new concept and a new way of doing things. Perhaps the time has come for a serious examination of a system of 'multi-country' ROO (i.e., a value added tariff) to replace the current system of 'single country' ROO.

¹³ Some of these programs are: Free and Secure Trade (FAST), NEXUS, Customs-Trade Partnership Against Terrorism (C-TPAT), Partners in Protection (PIP) and Customs Self Assessment (CSA).

Essentially, what these authors claim is that the 9/11 security measures introduced at the Canada-U.S. border have significantly eroded/offset the trade impact of the tariff preferences obtained by Canada since the 1989 Canada-U.S. FTA and the subsequent NAFTA.

There is, *a priori*, little chance that the U.S. under Trump abolishes the post 2001 security measures at the Canada-U.S. border. Yet, under NAFTA renegotiation, there is scope for Canada to combine trade and security issues by offering a security deal to the U.S. in return for an improved trade deal. This deal could take the form of a North American Security Perimeter within a Customs Union. Such a Canada-U.S. NASPCU, by establishing a common external tariff (i.e., a common tariff policy with respect to third countries) would clearly define an external trade perimeter on which an external security parameter could theoretically be superimposed. This NASPCU could, at least theoretically, be designed so as to liberalize the post 9/11 security measures and decongest the Canada-U.S. border while possibly shifting these measures (and associated direct administrative costs) at the external border for relations with the rest of the world.¹⁴

Georges and Mérette (2012) capture the trade and foreign direct investment impacts of moving to such a NASPCU. First, the study estimates econometrically the impact of post 9/11 security measures on sectoral trade flows using a gravity model. The OLS estimation results are provided in Table 1 (Canada's export performance to the U.S.) and Table 2 (U.S. export performance in Canada) for the nine available categories (or sectors) of exports and for total exports.¹⁵ For our purpose, we only report the parameter estimates of the dummy variable (*D911*) tracking the impact of the border security measures post 2001.¹⁶

¹⁴ According to Mueller and Stewart (2011), the direct cost of these enhanced security measures for U.S. federal homeland security is about U.S.\$50 billion per year, and probably more if we add local and state expenditures. For Canada, the direct administrative cost is much lower at around U.S.\$1 billion per year since 2001 (see <http://www.canadainternational.gc.ca>).

¹⁵ The nine sectors are Agriculture (AGRI), Resource (RESO), Food (FOOD), Textile (TEXT), Manufacture (MANU), Automobile (AUTO), High Tech (TECH), Services (SERV), and Transport (TRAN).

¹⁶ The relation specified in natural logarithms, with a constant term and a dummy variable for 9/11 is:

$$\ln(E_{i,j,s,t}) = \alpha + \beta \ln(GDP_{j,t}) + \gamma \ln(S_{j,i,t-1} P_{i,t-1} / P_{j,t-1}) + \delta \ln(E_{i,j,s,t-1}) + \theta CUR_{i,s,t} + \mu D911_t + \varepsilon$$

where E is the year- t export of sector s by country i to country j (in constant dollar), $S_{j,i}$ is the nominal exchange rate (the number of units of currency j for one unit of currency i), CUR is the time- t capacity utilisation rate of sector s in country i , $D911$ is a dummy variable that takes a value of "0" before 9/11 and "1" thereafter.

We see in Table 1 that the real volume of exports of the Canadian Automotive (AUTO) sector to the US has been reduced by 8.4% as a consequence of the post 9/11 US security measures. The High Tech (TECH), Transport (TRAN), and Textile and Clothing (TEXT) sectors have also been affected deeply (respectively -10.2%, -8.3%, and -12.3%). The *p*-values given below each estimates suggest that these parameters are statistically significant. This is not the case for the other sectors (AGRI, RESO, FOOD, MANU, and SERV) where the parameters are not significant at traditional values. Table 2 reports similar results for the trade impacts of Canadian security measures at the Canada-US border.

In a second step, Georges and Mérette (2012) compute a sectoral tariff equivalent to these security measures. That is, they respond to the following question. If the U.S. and Canadian governments had imposed in the early 2000s protectionist measures (in the form of a tariff barrier on Canadian and U.S. goods and services) leading to a percentage reduction in Canada's and U.S. (bilateral) exports to the level given by the estimated parameters of the border security measures (Tables 1 and 2), what should have been the magnitude of these tariffs? This is a complex question that the authors answer by shocking and simulating a computable general equilibrium model.¹⁷ They impose the *exogenous* percentage change in sectoral real Canadian exports to the U.S. (estimated in Table 1) and real U.S. exports to Canada (estimated in Table 2) and the model solves *endogenously* for the 'equivalent' sectoral tariff rates necessary to absorb the trade shock.¹⁸

Finally, in a third step, Georges and Mérette (2012) examine the impact of eliminating the post 9/11 security measures at the Canada-U.S. border while shifting them at the North American Security Perimeter (NASPCU). Moving to NASPCU implies two shocks in the CGE model. First, new security measures at the North American perimeter are imposed. A crude way to capture the additional security

¹⁷ The model is a 3-region (Canada, U.S., and the rest of the world) 9-sector static general equilibrium model that features production activities and consumption in each region as well as the flow of investment among regions. A feature of the model is the distinction between the activities of domestic and foreign-owned firms at the microeconomic level, both in terms of demand and production characteristics, inspired by similar approaches by Petri (1997) and Verikios and Zhang (2000).

¹⁸ Note that when the sectoral parameter for the D9/11 dummy variable is not statistically different from zero (at 10%) in Tables 1 and 2, then the change in exports is exogenously set equal to zero in the model.

costs at the North American perimeter is to set a common external tariff equal to the *maximum* of current sectoral MFN tariff rates of the US or Canada (whichever is the highest).^{19,20} Second, they eliminate the U.S. and Canada 9/11 security measures at the Canada-U.S. border. According to the modeling strategy, this implies eliminating equivalent tariffs of the security measures computed in the second step described above.²¹

Table 3 provides the trade impact of eliminating the 9/11 security measures at the Canada-U.S. border according to Georges and Mérette (2012). Note that the column ‘Nationality’ refers to the ownership of the firm (domestic or foreign-owned, i.e., multinationals firms). The column ‘From’ refers to the geographical location of production by the firm, and column ‘To’ refers to the geographical destination of the goods or services produced. Hence, in row 2 (CAN.CAN.US) we see the export of Canadian-owned firms located in Canada and exporting to the U.S. In row 17 (US.ROW.US), we see the export of a U.S.-

¹⁹ Zhang (2014) pursues this idea more precisely by implementing a harmonisation of Canadian security measures to the US level with respect to the ROW. This harmonisation step is presented as a negotiation game between Canadian and US governments. In terms of the model, one needs to find the tariffs equivalent to the existing US security measures with respect to the ROW and the additional efforts needed by Canada to raise their security measures to the U.S. standards (with respect to the ROW). This is based on the econometric estimates of the D9/11 dummy variables relevant to trade flows with the ROW. For example, based on her seemingly unrelated regression estimates (SURE) (Row 6 of her Table 3.1), US negotiators may claim that their security measures had the impact of reducing US imports of the ROW transportation services by 19.7%. US negotiators may then claim that Canada should introduce security measures so as to reduce Canada’s imports of the ROW transportation services by 19.7% as well. In terms of the model, all that is needed is to generate in the CGE model the Canadian MFN tariff (on the ROW) that would also imply a reduction of Canada’s import of ROW transportation services by 19.7%. This becomes the burden for Canada of shifting border security at the North American security perimeter. Of course the same analysis is done for all sectors.

²⁰ This study does not gauge the impacts of other possible measures such as the harmonisation of product safety and quality regulations. Also, the study does not estimate the North American “security gains” or the “sovereignty erosion” in terms of intelligence data sharing, joint law enforcement and migration procedures, and pre-screening of offshore imports and travellers.

²¹ Of course, in this scenario the simulated results for Canadian (U.S.) exports to the U.S. (Canada) should mirror/offset the econometrically estimated trade effects of the US (Canada)-imposed 9/11 security measures in Tables 1 and 2. In fact the numbers reported in rows 2, 11, 20, and 4, 13, and 22 in Table 3 correspond exactly to the negative of the (statistically significant) econometric estimates reported in Tables 1 and 2. For example, the second row (CAN.CAN.US) in Table 3 indicates that firms of Canadian nationality located in Canada increase their exports to the US by 10.2% in the High Technology (TECH) sector (while Table 1 reports that security measures had lowered Canadian exports to the US by 10.2% in that sector). The relevant aspect of using a general equilibrium model here is that, unlike the econometric analysis, we are now in position to analyse many economic effects of the liberalisation scenario.

owned firm located in the rest of the world and exporting to the U.S.²² The other columns refer to the relevant sector of activity of these firms.

A key result of the analysis in Table 3 is that the elimination of the 9/11 security measures at the Canada-U.S. border tend to generate more trade between Canada and the U.S. (rows 2 and 13, for example) at the expense of U.S. trade with the ROW (rows 6, 15, 24) while Canada's trade with the ROW will be positively or negatively impacted depending on the sector of activities (rows 3, 12, 21). This suggests that firms located in North America, and especially in the U.S., reacted to the 9/11 security measures by shifting some of their exports to the ROW (instead of Canada) and that liberalising the security measures at the Canada-U.S. border would reverse this trade diversion pattern.

Production in Canada would increase in all sectors (rows 1, 4, 7 Table 4). This holds for Canadian firms (row 1) and for multinationals (both U.S.-owned and ROW-owned firms) located in Canada (rows 4 and 7). With the rise in Canadian exports to the U.S. (rows 2, 11, 20 in Table 3), one may expect that doing business in Canada becomes more appealing from the investors' point of view. Although labour supply is assumed fixed and immobile between countries in the model, the allocation of the stock of capital owned by Canadians, Americans, and Foreigners, is determined endogenously through FDI flows. As can be seen in Table 4 (rows 1, 4 and 7) FDI inflows to Canada and Canadian dis-investment in the ROW increase the stock of capital available for firms located in Canada, which stimulate production in all sectors and firms (both Canadian and foreign) located in Canada. Table 5 reports the changes in the sectoral stock of capital. The stock of capital in Canada (rows 1, 4, and 7) enlarges in almost all sectors as Canadian investors (row 1) and foreign investors (FDI in rows 4 and 7) reallocate their wealth in favour of the Canadian region. Table 5 also reports that Canadian investment abroad (especially in the ROW but also in the U.S.) declines significantly (rows 2 and 3). This is consistent with results in Table 4 (rows 2 and 3) where Canadian multinationals located in the ROW, and to a lesser extent in the U.S., tend to reduce their activity. 9/11 U.S.

²² Domestic production for domestic use is also reported. For example in row 1, CAN.CAN.CAN is the production of a firm of Canadian nationality located in Canada and that is 'exported' to Canada (i.e., kept for domestic/Canadian consumption).

security measures at the Canada-U.S. border might have provided a rationale for Canadian firms to increase their activity directly in the U.S. instead of exporting from Canada. With the elimination of the U.S. security measures, some of these activities could be repatriated in Canada, at the expense of Canadian multinationals located in the U.S. (row 1 versus row 2, Table 4).

U.S. multinational firms located in the ROW would lower their production over there (row 6, Table 4) as they lower their FDI in the ROW (row 6, Table 5) while reinvesting both in the U.S. and in Canada. This tends to increase the U.S. production both in the U.S. (row 5, Table 4) and in Canada (row 4, Table 4), a move that President Trump, without any doubt, would appreciate. Observe finally in Table 5 (rows 3 and 6) that a NASPCU would tend to reduce Canadian and U.S. direct investment abroad (ROW) while ROW would intensify its FDI to Canada and U.S. (rows 7 and 8).

Finally, Table 6 reports the impact of establishing a NASPCU on welfare and other aggregate indices for Canada and the U.S. Georges and Mérette (2012) use the Hicksian equivalent variation to measure the welfare cost of the U.S. border (or the welfare benefit of removing them). This is the change in income that consumers would need at pre-shock prices to afford the level of utility that would be reached if U.S. and Canada security measures were eliminated at the border (while increased at the North American perimeter security). The welfare change (in terms of Hicksian equivalent variations) represents about U.S.\$24 billion for Canada (2.3% of GNP) and U.S.\$19 billion for the U.S. (0.2% of GNP) on an annual (permanent) basis. This appears to be a conservative assessment with respect to the study of Mueller and Stewart (2011) who estimate the deadweight losses and other losses in U.S. consumer welfare due to the enhanced 9/11 security measures to be roughly U.S.\$30 billion *annually*. Trade volume would increase by 7.3% for Canada and 1.4% for the U.S.

In conclusion, mixing trade, FDI and security issues when renegotiating NAFTA can be presented as a win-win strategy with advantages to both Canada and the U.S.

4. Gains from Geographical Trade Diversification

Rising shares of international trade accounted for by emerging and developing economies is a striking feature of the overall growth in international trade in recent years. Fig. 3 taken from a study of the

World Trade Organization (WTO, 2013) illustrates how the shares of North-North trade have shrunk in the last 20 years while those of North-South and South-South trade have expanded. Consequently, the world share of merchandise trade for North countries, such as those in North America and Europe, has declined substantially since 1983.²³ Moreover many countries of the South are benefitting from a demographic dividend in the form of an increasing number of workers and consumers. This, combined with better trade-facilitating institutions and infrastructure, could make the ‘South’ a market with major growth opportunities for the ‘North’.

Even if U.S. remains our major trading partner for obvious geographical reasons, there is scope for Canada to explore channels that would permit to enhance trade with key emerging countries. This applies to both Canadian exports to emerging markets but also import from these countries. The expansion of production in the South, which originates from a ‘technical catch up’ (Acemoglu and Ventura, 2002) and from a ‘demographic dividend’ (essentially a positive supply shock) relative to an ageing North, depresses the relative prices of the goods produced in the South on world markets. These lower prices would benefit Canadian consumers but also Canadian firms that require intermediary goods produced in global production/value chains.

The rest of the section provides some results that compare North-North versus North-South trade diversification schemes for Canada. It draws on the study by Georges, Mérette and Seçkin (2009) and Georges, Lisenkova, and Mérette (2013) who use a multi-country overlapping-generations (OLG) model fully described in Mérette and Georges (2010). The model, through its OLG structure, takes into account the demographic trends in terms of population size and structure of each country. For example, it replicates the changes in the sizes of age groups, taking into account the ageing of population in some countries and the relatively younger structure in other countries. The model is made up of seven regions.²⁴

²³ For exports, from 16.8% to 12.8% for North America and from 43.5 % to 37.1% for Europe. For imports, from 18.5% to 17.1% for North America and from 44.2% to 37.1% for Europe. See Table 1.5 and 1.6 of *International Trade Statistics 2012* of the WTO.

²⁴ North-America is disaggregated into U.S. and Canada to distinguish the impacts of ageing on a relatively closed versus an open economy. Europe is aggregated into one region (E.U.-15). Asia is disaggregated into three countries: Japan, as it represents a developed country with an already ageing population, and China and India as they are

The model formally introduces trade in goods between countries by using the Armington assumption of imperfectly substitutable goods. Each region in the model produces one single good which is an imperfect substitute to the good produced in any other regions. Therefore, households in each region consume a basket of all the imperfectly substitute goods produced in all regions of the world.

Let us assume that Canada, through diverse policies, generate a diversification of its trade away from the U.S. in favour of other trade partners. This could result from a voluntarily trade policy of Canada (e.g. FTAs with specific countries), but this would also be accomplished automatically if the U.S. withdrew from NAFTA. Although it is difficult to gauge how much trade diversification could be achieved, let us assume for the sake of the argument that U.S. share in total Canadian import decrease by 10% points while the share of other partners would increase correspondingly as shown in Table 7. The change in shares is implemented permanently, but incrementally, by 2.5% points every ten-year over a forty-year period, starting in 2020 until the full change is achieved in 2050.²⁵

Fig. 4 shows how Canada would gain or lose in terms of real consumption per capita. The benchmark case of strong dependence of Canada's trade on the U.S. economy (and no U.S. withdrawal from NAFTA) indicates that the average living standards of Canada (real consumption per capita) would start to decline from 2020 onwards because of population ageing in Canada. Relative to the benchmark case, our results indicate that Canadians would lose from a diversification scheme with the E.U. (e.g., a CETA and a concomitant U.S. withdrawal from NAFTA) or with Japan. Note in Fig. 4 that paths for Canadian real consumption per capita in case of diversification to E.U. or to Japan overlap. In particular, diversification with E.U. or Japan would accentuate the loss of welfare that is expected due to population ageing. It would cost Canadians roughly 1.5% of their per capita real consumption by 2050, relative to a

emergent countries with very different demographic projections. Remaining countries are aggregated into one region – the ROW, to close the model.

²⁵ From a modeling perspective this shock is implemented by exogenously changing the share parameters in the Armington-based import demand functions. The 10 % point change in the U.S. share of total Canadian import appears quite realistic given the pattern shown in Fig. 1d.

scenario of no diversification away from the U.S. (i.e., U.S. remains in NAFTA and Canada does not ratify CETA).

A diversification towards India or China appears more appealing, as shown in Fig. 4. However, these scenarios would imply increasing the share of Chinese (or Indian) goods in Canadian import by 10 % points. It is perhaps more realistic to consider a larger geographical diversification pattern, and Fig. 5 shows results for both North-North and North-South diversification schemes. In the North-North diversification away from the U.S., the share of Japanese and E.U. goods increases each by 5% points in total Canadian import (while the U.S. share falls by 10% points). The North-South diversification scheme represents a weighted average of the previous diversification schemes to China, India, and the ROW – the 10% points share increase is spread equally between China, India, and the ROW. The ROW is a composite of all remaining countries/regions of the world, such as Russia, Africa, Brazil and South-America, Oceania, Arabic countries, Turkey and Turkic countries. Fig. 5 illustrates that, according to the simulations, North-South diversification schemes may improve Canadian welfare by propping up real consumption per capita, whereas North-North diversification schemes away from the U.S. would amplify the expected burden associated with population ageing in Canada. The choice of diversifying to the North (Europe and Japan) instead of the South (China, India, and ROW) would cost Canadians roughly 5% of per capita consumption by 2050.²⁶

In conclusion, Canadian negotiators should continue their effort to provide a favourable trade environment to Canadian firms in the global economy. Emerging markets represent significant markets which should be explored further.

²⁶ One caveat is the reliance of our model on the Armington (1969) trade structure which assumes imperfect substitution between goods of different geographical origins, so that the law of one price does not hold in the form given by the Heckscher-Ohlin (H-O) model. This assumption, typically used in large scale computable models to generate the observed intra-sectoral trade flows between countries, implies that each country has market power and faces a downward-sloping (foreign) demand curve for its product (i.e., its price elasticity is not infinite). Compared to the H-O model where small shocks can cause production of goods in a country to appear or disappear through comparative advantage adjustment, here quantity adjustment by producers to diverse shocks is somewhat muted by the lack of direct competition between regional producers, while terms of trade effects are greater as larger price changes are necessary to clear markets. Multi-sectoral analyses are however needed, where the Armington assumption could be relaxed depending on the nature of the goods (i.e., differentiated manufactured goods versus homogenous primary goods that would follow the law of one price).

5. Discussion and Conclusion

President Trump is what he said he was: an opponent of free trade, immigration, and abortion rights; a defender of the American fossil fuel industry, and the architect of the Great Wall of America. He won an election on these foundations and his pursuit of them as president is legitimate. But could his position on trade be changed? According to Krugman (1996), “many people believe that someone who has made a personal fortune will know how to make an entire nation more prosperous.” However, a country is not a company and the general principles on which an economy must be run are different from those that apply to a business. Hence, concludes Krugman, successful business leaders who have been promoted to economic advisers must go back to school before they can make pronouncements as economic advisers. This is also valid for the new U.S. President (even if his opponents will point out that his business record includes multiple bankruptcies and non-payment of contractors and their workers).

The traditional case in favor of international trade is not about developing export markets for our goods and generating trade surpluses and jobs in these sectors.²⁷ More fundamentally, the case for trade is about importing goods, which allows our country to specialize in the production of these goods in which we have a comparative advantage and export them to finance the import of goods for which we have no comparative advantage (so that we choose not to produce them in the first place). Therefore engaging in international trade implies both a destruction and a creation of jobs – a creative destruction of jobs very much like the process that Schumpeter associated with technological progress. This creative destruction of jobs is considered advantageous to countries because, by specializing in sectors for which countries have a comparative advantage, they also gain from an increase in average labor productivity and income.

During the 2016 presidential campaign, the main opposition to trade from U.S. politicians was that jobs America wants to have, the good jobs, the manufacturing jobs, have gone because of free trade

²⁷ If Trump truly wants to generate a balance of trade surplus, he should instead focus on ways to develop an excess of national savings over domestic investment and ultimately transform the U.S. into a net exporter of capital. Attracting U.S. multinationals back into the U.S. would actually generate the opposite. As U.S. firms relocate into America, the ensuing increase in wages and prices would make U.S. less competitive and worsen its trade balance deficit.

deals. Yet, the shedding of manufacturing jobs started well before NAFTA and other trade deals. According to DeLong (2017), the U.S. manufacturing jobs share in nonfarm employment was 30 percent in 1952, 24 percent in 1971, less than 15 percent in 1994, and is now at 8.6%. Hence, free trade agreements cannot be the major cause of this shedding. Instead, labor-saving technology advances explain this loss of relatively inefficient manufacturing jobs. But very few politicians would argue that technological advances are a bad thing for America and Americans. It is easier to designate international trade, and foreigners, as responsible for the shedding of manufacturing jobs. For DeLong, the high-end credible estimate is that NAFTA produced a shedding of 200,000 manufacturing jobs in the U.S. This represents 0.14 percent of nonfarm employment and less than 1% of the total shedding of the manufacturing job share since 1972.²⁸ Hence, NAFTA was and is simply not a very big deal in the overall transformation of the U.S economy.

For many, the disappearance of manufacturing jobs has provided them with the opportunity to be pulled out into a better alternative job rather than being pushed out into a worse one. Yet, in the case you lose your job under a bad macroeconomic context (e.g., if unemployment rate is more than 8 percent), then Davis and von Wachter (2011) estimated that your income over the next twenty years would be 2/7 of what it would have been otherwise, which is roughly six years' worth of expected wages over that period. Thus, the process of creative destruction of jobs generates losers – workers that are left behind in the short-term and sometimes also in the long-term. But recall that 99% of the loss in manufacturing jobs in the U.S. since 1972 is not due to NAFTA.

All this does not mean that we need to be free trade fundamentalists. As argued by Rodrik (2011) in his case against trade fundamentalism, “[it] would be easy to associate free trade always with economic and political progress and protectionism with backwardness and decline. The real case for trade is subtle and therefore depends heavily on context. We need to understand not just the economics of free trade, but

²⁸ DeLong also estimates that if the U.S. had done as good as Germany in protecting its manufacturing, it would have given the U.S. today a manufacturing employment equal to 12.2 percent rather than 8.6 percent of nonfarm employment, a gap of 5.4 million manufacturing jobs. The loss of 200,000 jobs in manufacturing because of NAFTA is just 4% of that gap.

also its implications for distributive justice and social norms.” According to Rodrik (2017), the basis for the claim that trade is problematic because it redistributes income is true, but trivial. As seen above, technology is the source of endless churns in the economy and the main culprit behind the loss of manufacturing jobs in the U.S. There is a coherent justification for compensating the losers of free trade for reasons of solidarity and equity, but the justification would apply in case of innovation as well. Consequently, the remedies should be the same (progressive tax systems, labor market policies, employment-friendly macro policies.) Yet, for Rodrik (2017), “[free] trade may undercut the social bargains struck within a nation and embedded in its laws and regulations.” There is little basis to support a U.S. company that does social dumping by outsourcing to a supplier in Bangladesh and which employs workers in 12-hour shifts and under extremely hazardous conditions. For him, “just as countries can impose duties, they should be allowed to restrict imports that demonstrably threaten damage to regulatory arrangements”. Yet, even if the case for free trade must be qualified (and, perhaps, despite optimal tariff theory), we do not need to be a free trade fundamentalist to understand that Trump’s mercantilist slogans and threats to add a border tax of 20 or 35 % in some cases, will eventually hurt Mexicans, Americans, and Canadians.

For Canada, both imports and exports are vital, and trade with the U.S. and with the rest of the world is of key importance. The new mercantilist position of the U.S. administration under Trump requires Canada to reflect on how to communicate the Canada-U.S. trade relation in terms of win-win strategies. Renegotiation towards an update of a twenty-two year old NAFTA is not a bad thing in itself, and recent negotiations of second-generation trade agreements such as CETA has given Canadian trade negotiators the experience needed to prepare a wish list of themes that could be improved. Yet, the thesis of this paper is that the benefits to Canada of NAFTA (or of any new preferential trade arrangements that we could conclude with the U.S., including a CU) have eroded because tariff preferences have decreased. Tariff preference erosion originated, first, in the lowering of U.S. MFN tariffs since the start of NAFTA, and second, because U.S. have extended preferences to other countries through new FTAs (so that many other countries have now access to these same (shrinking) preferences).

Security measures at the Canada-U.S. border introduced after the 2001 terrorist attacks have also negatively affected the level of bilateral trade. That a high level of trade between Canada and the U.S. persists, despite enhanced border security measures and the reduced benefits occurring from NAFTA, suggests how important these trade flows remain for North American firms, even if done on a non-preferential basis. However, our results in Section 3 suggest that there is scope for fresh negotiations between Canada and the U.S. that would mix issues of trade, FDI, Customs Union, and North American security, and that would be a win-win strategy. As our results show, it could even imply foreign direct investment into the U.S. (and Canada) and the return to the U.S. of some U.S. investment abroad, a trend that Mr. Trump would cherish. Nevertheless, a North American security perimeter implies Canada's sovereignty 'erosion' in terms of intelligence data sharing, joint law enforcement and migration procedures, and pre-screening of offshore imports and travellers. It remains to be seen whether Canadian and Americans would dare to engage on these questions, especially at a time when the pressing issues for the new U.S. administration seem to be the construction of a Great Wall South of the U.S. border and visa restrictions for citizens of targeted countries.

Some U.S. firms will lobby in favor of keeping the U.S. into NAFTA because ROO have helped them to secure a market for their own (intermediary) products in Canada and Mexico, forging continental supply chains. But if ROO are to be renegotiated, Canadians should stand ready to advocate for a new set of NAFTA's ROO that are consistent with the ones negotiated under CETA. More importantly perhaps, traditional ROO that assign origin to only one country, that is, that treat origin as an all-or-nothing concept appear increasingly foreign to a truly integrated world taking advantage of global (instead of continental) supply chains. Lloyd's (2002) proposal for a ROO based on the idea of multiple-origin countries and value added tariff rates that would increase with the proportion of the value which is added outside the free trade area, and would shrink to zero if the value was entirely from the FTA, is a proposal which merits serious consideration.

With Trump's willingness to renegotiate NAFTA, many Canadians may find some relief in the fact that Canada has just secured new markets in Europe through CETA. Yet, signing a FTA is also an

incentive to facilitate production in an integrated value chain within this trade area. Hence we must value a FTA for the new export markets it offers, but also because of new import opportunities at lower prices. From this perspective, the ageing E.U. is likely to become a strain on Canadian firms' competitiveness as the prices of all EU goods, including intermediary goods, will most likely increase relatively to prices in other markets, especially emerging markets, thereby offsetting the advantage provided by CETA tariff preferences when importing from Europe. This means that Canadian negotiators should continue to explore opportunities for geographical trade diversification, not only for exports of Canadian goods, but also for imports.

Perhaps WTO negotiations will be reactivated. Ironically, the new protectionism in the U.S. may even induce some reluctant countries to rush back to the WTO table. As Bhagwati (2008) has argued before, regional free trade zones are a misnomer as they are not about 'free trade' but about 'preferential treatment', and as such they are termites undermining the WTO non preferential trading system. The establishment of the most favored nation (MFN) clause in the GATT, and then the WTO, (which automatically extends to every member country the lowest tariff extended to any member) was meant to curb the ability of the more powerful market to create political dependence on trade concessions. As argued by Heidrich and Tussie (2010), the GATT system, by adopting non-discrimination as a pillar was viewed as a means of eroding imperial preferences, while at the same time protecting the interest of smaller and weaker territories by curbing the ability of the more powerful countries to threaten the suspension of concessions.

We hope that the current threat of a large power against weaker countries will finally open the eyes of trade negotiators around the world and strengthen the case in favor of the WTO and its relevance. Canada cannot simply wait and see. Canadian trade negotiators should advance the case in favour of non-preferential free trade at the WTO. Meanwhile, however, Canada should also engage with large emerging countries such as China, India, Brazil, and other Asian markets such as the ASEAN countries. The scale and growth potential of these markets is huge, not just as a destination for Canadian goods, but also as a more efficient way for Canadian firms to exploit global production chains.

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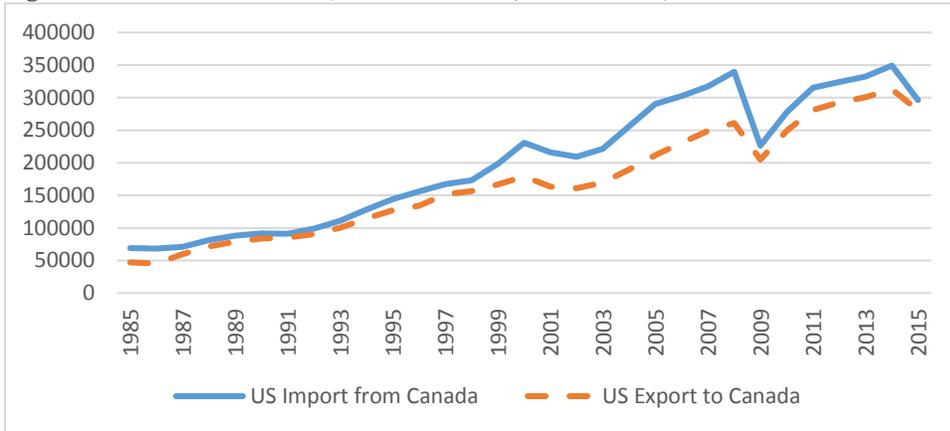
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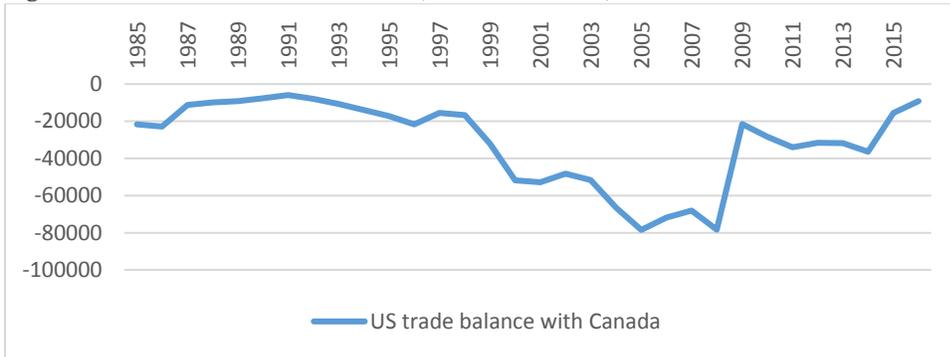
Figs. 1 Trade data

Fig. 1a U.S. trade with Canada (in millions of US\$, current value)



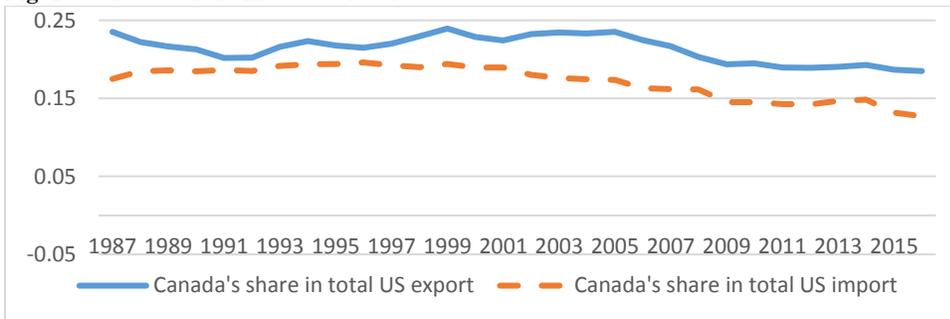
Source: United States Census Bureau – U.S. trade data online.

Fig. 1b U.S. trade balance with Canada (in millions of US\$)



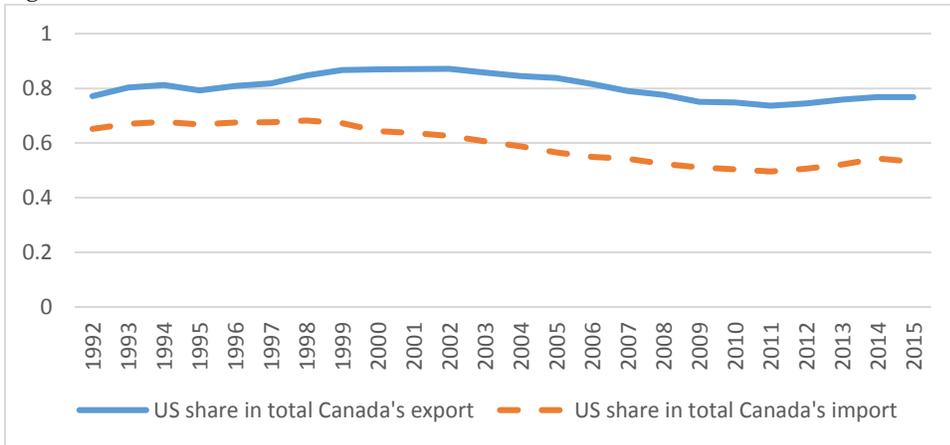
Source: United States Census Bureau – U.S. trade data online.

Fig. 1c Canada's share in U.S. world trade



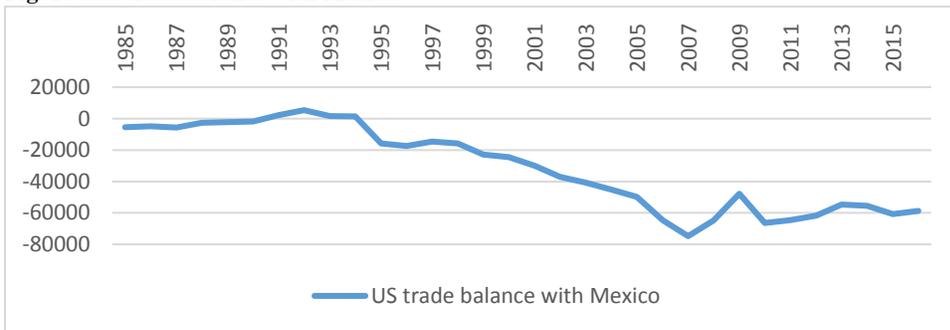
Source: United States Census Bureau – U.S. trade data online.

Fig. 1d U.S. share in Canada's world trade



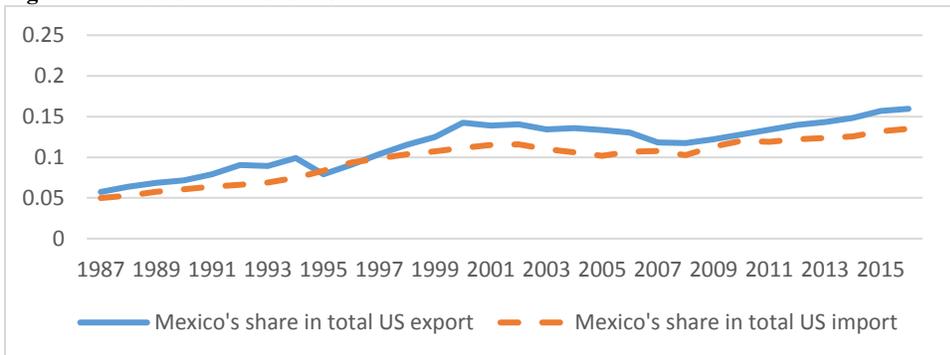
Source: Industry Canada – Trade Data Online.

Fig. 1e U.S. trade balance with Mexico



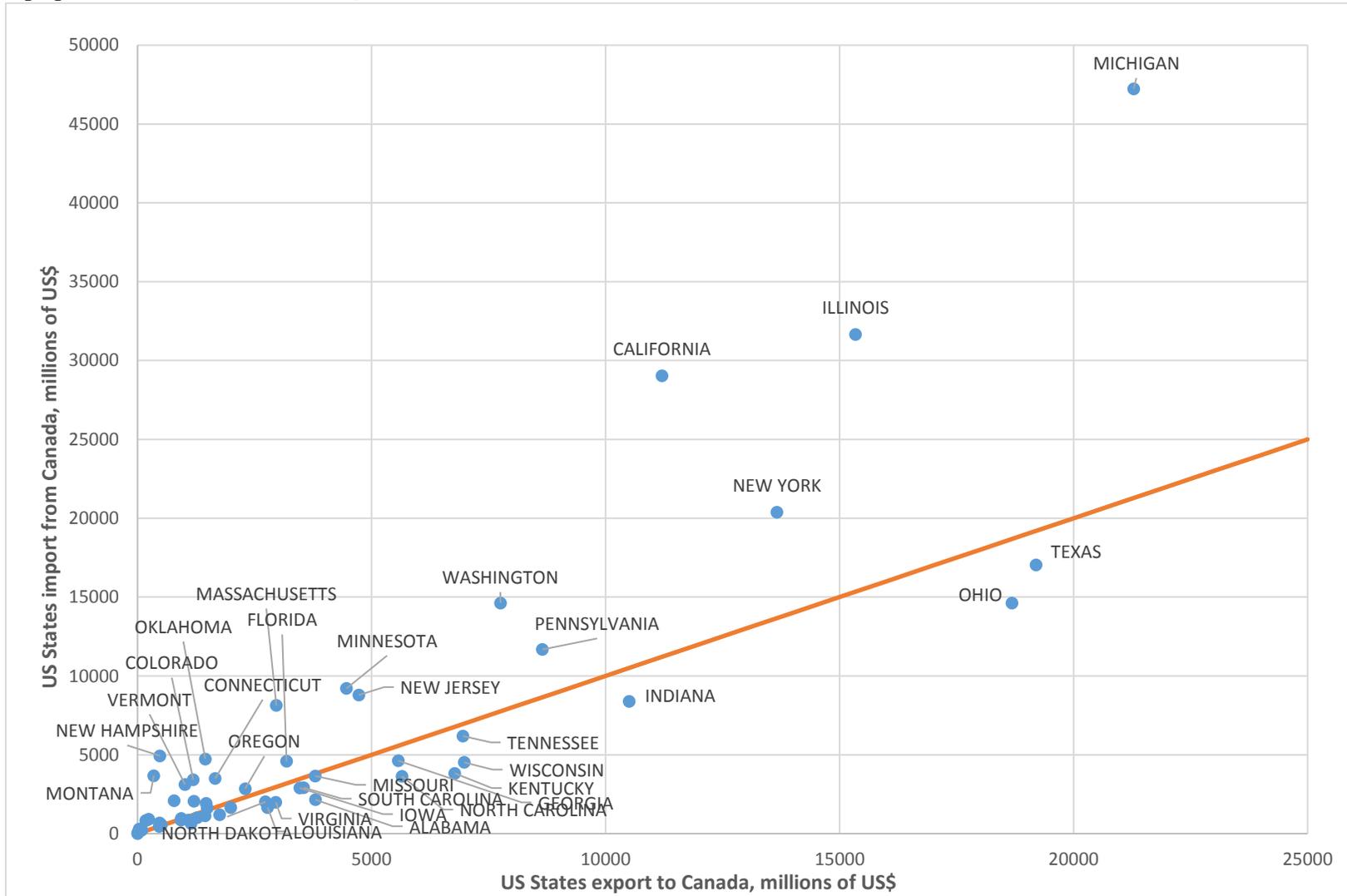
Source: United States Census Bureau – U.S. trade data online.

Fig. 1f Mexico's share in U.S. world trade



Source: United States Census Bureau – U.S. trade data online.

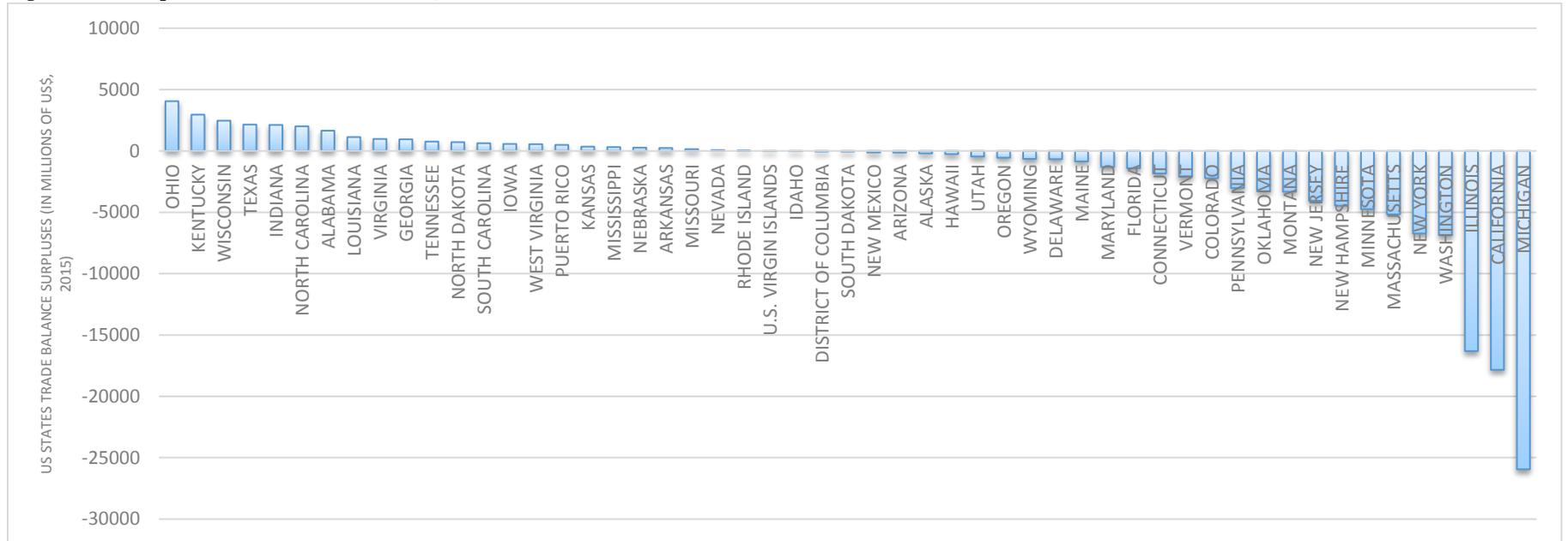
Fig. 1g Trade of U.S. States with Canada, 2015 (in millions of US\$)



Source: Industry Canada – Trade Data Online.

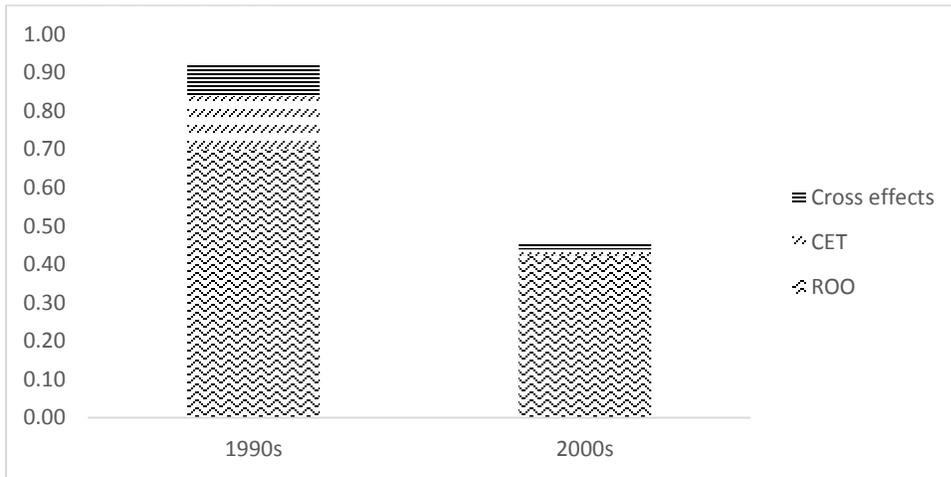
Note: U.S. States above (below) the diagonal have a trade balance deficit (surplus) with Canada.

Fig. 1h Trade surplus of U.S. States with Canada, 2015 (in millions of US\$)



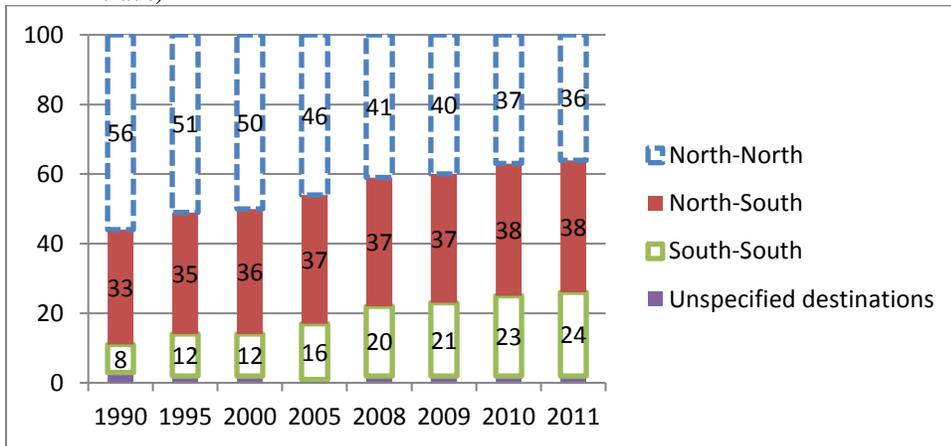
Source: Industry Canada – Trade Data Online.

Fig. 2 Additional Gains (in proportion of GDP) if Canada-U.S. had negotiated a Customs Union (instead of NAFTA) in the 1990s and in the 2000s



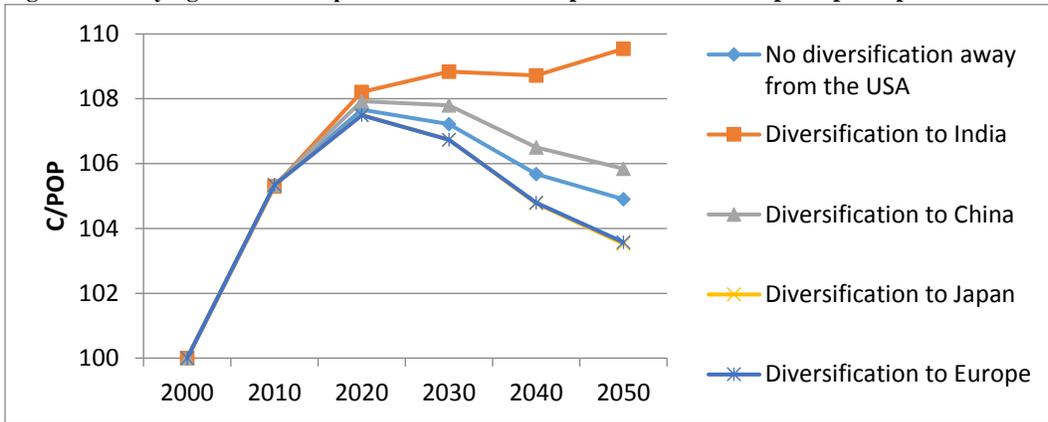
Source: Georges (2010).

Fig. 3 Shares of North-North, North-South and South-South trade in world merchandise exports, 1990-2011 (% of world trade)



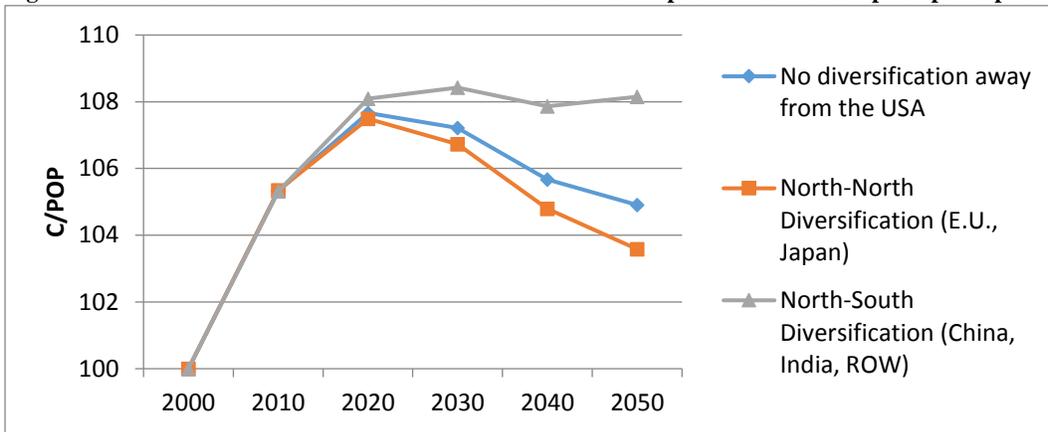
Source: WTO (2013).

Fig. 4 Diversifying Canada's import from the U.S. : Impact on real consumption per capita



Source: Georges, Mérette and Seçkin (2009).

Fig. 5 North-North and North-South diversification schemes: Impact on real consumption per capita



Source: Georges, Mérette and Seçkin (2009).

Table 1. Regression results for Canada's real export performance to the U.S.¹

	Total	AGRI	RESO	FOOD	TEXT	MANU	TECH	AUTO	SERV	TRAN
D911	0.007	-0.072	-0.208	-0.030	-0.123	0.007	-0.102	-0.084	-0.028	-0.083
	0.874	0.459	0.557	0.571	0.006*	0.868	0.02**	0.069***	0.747	0.026**

1. Note: *= significant at 1%, **=significant at 5%, ***=significant at 10%.

Source: Georges and Mérette (2012).

Table 2. Regression results for the U.S. real export performance to Canada¹

	Total	AGRI	RESO	FOOD	TEXT	MANU	TECH	AUTO	SERV	TRAN
D911	-0.218	0.072	-0.030	-0.028	-0.199	-0.185	-0.333	-0.169	-0.127	-0.132
	0.003*	0.359	0.886	0.376	0.015**	0.001*	0*	0.067***	0.186	0.007*

1..Note: *= significant at 1%, **=significant at 5%, ***=significant at 10%.

Source: Georges and Mérette (2012).

Table 3. Sectoral trade flows by firm's nationality (in %)¹

Row	Nationality	From:	To:	AGRI	RESO	FOOD	TEXT	MANU	TECH	AUTO	SERV	TRAN
1	CAN	CAN	CAN	2.2	1.2	2.0	1.9	4.4	4.5	4.5	1.1	2.2
2	CAN	CAN	US	0.0	0.0	0.0	12.3	0.0	10.2	8.4	0.0	8.3
3	CAN	CAN	ROW	-0.7	-0.1	-1.7	0.7	0.6	10.7	9.3	-1.6	-0.6
4	CAN	US	CAN	0.0	0.0	0.0	19.9	18.5	33.3	16.9	0.0	13.2
5	CAN	US	US	0.1	0.1	0.0	0.2	0.2	-2.4	-2.4	0.0	0.3
6	CAN	US	ROW	-1.9	-0.3	-3.0	-4.1	-1.3	-4.9	-4.7	-1.8	-1.5
7	CAN	ROW	CAN	1.2	1.4	5.2	0.4	0.0	-8.6	-6.1	3.1	0.7
8	CAN	ROW	US	1.5	0.0	-8.0	-1.2	1.9	2.6	-5.5	1.0	0.8
9	CAN	ROW	ROW	-0.9	-0.4	-0.9	-0.6	-0.3	-0.3	-0.4	-0.9	-0.6
10	US	CAN	CAN	2.3	1.3	2.2	1.9	3.3	-12.8	0.0	1.4	2.0
11	US	CAN	US	0.0	0.0	0.0	12.3	0.0	10.2	8.4	0.0	8.3
12	US	CAN	ROW	-0.5	-0.1	-1.5	1.0	0.7	14.1	10.5	-1.5	-0.5
13	US	US	CAN	0.0	0.0	0.0	19.9	18.5	33.3	16.9	0.0	13.2
14	US	US	US	0.2	0.1	0.2	0.3	0.3	0.0	0.1	0.1	0.3
15	US	US	ROW	-1.8	-0.3	-2.9	-4.0	-1.3	-3.7	-4.2	-1.8	-1.4
16	US	ROW	CAN	1.4	1.5	5.3	0.5	-1.3	-27.7	-10.3	3.2	0.7
17	US	ROW	US	1.7	0.0	-7.9	-1.1	2.0	5.2	-3.1	1.1	0.8
18	US	ROW	ROW	-0.7	-0.4	-0.7	-0.5	-0.2	1.1	0.2	-0.7	-0.5
19	ROW	CAN	CAN	2.7	1.5	2.9	2.6	4.3	7.6	4.9	1.9	2.5
20	ROW	CAN	US	0.0	0.0	0.0	12.3	0.0	10.2	8.4	0.0	8.3
21	ROW	CAN	ROW	0.0	0.0	-1.0	1.4	0.8	10.7	9.9	-1.1	-0.2
22	ROW	US	CAN	0.0	0.0	0.0	19.9	18.5	33.3	16.9	0.0	13.2
23	ROW	US	US	0.7	0.2	0.7	0.5	0.2	-2.7	0.9	0.6	0.5
24	ROW	US	ROW	-1.4	-0.2	-2.5	-3.8	-1.2	-4.8	-4.8	-1.5	-1.1
25	ROW	ROW	CAN	2.3	1.5	5.8	1.0	-0.1	-5.0	-5.9	3.6	1.2
26	ROW	ROW	US	2.3	0.1	-7.4	-0.5	2.2	2.6	-2.0	1.5	1.2
27	ROW	ROW	ROW	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1

1. Note: Domestic production for domestic use is also reported. For example CAN.CAN.CAN is the production of a firm of Canadian nationality located in Canada and "exported" to Canada (i.e., kept for domestic/Canadian consumption).

Source: Georges and Mérette (2012).

Table 4. Sectoral output (in %)

Row	Nationality	Location	AGRI	RESO	FOOD	TEXT	MANU	TECH	AUTO	SERV	TRAN
1	CAN	CAN	1.4	0.7	1.5	4.9	2.8	7.9	7.3	1.1	2.2
2	CAN	US	-0.2	0.0	-0.1	0.1	0.5	-1.5	-1.3	-0.1	0.2
3	CAN	ROW	-0.9	-0.4	-0.9	-0.7	-0.3	-0.1	-0.8	-0.9	-0.5
4	US	CAN	1.5	0.8	1.7	4.9	2.1	1.4	6.1	1.3	2.1
5	US	US	-0.1	0.1	0.0	0.3	0.6	0.6	0.7	0.1	0.3
6	US	ROW	-0.7	-0.3	-0.8	-0.5	-0.2	1.3	-0.1	-0.7	-0.4
7	ROW	CAN	1.8	0.9	2.3	5.4	2.8	9.2	7.5	1.8	2.5
8	ROW	US	0.3	0.2	0.5	0.5	0.5	-1.7	1.3	0.6	0.4
9	ROW	ROW	-0.2	0.0	-0.2	-0.2	0.0	0.2	-0.3	-0.1	-0.1

Source: Georges and Mérette (2012).

Table 5. Physical capital stock (in %)

Row	Nationality	Location	AGRI	RESO	FOOD	TEXT	MANU	TECH	AUTO	SERV	TRAN
1	CAN	CAN	0.2	-0.1	0.6	2.0	0.5	1.9	1.7	0.5	0.8
2	CAN	US	-0.1	0.0	0.0	0.1	0.3	-1.0	-0.8	0.0	0.1
3	CAN	ROW	-1.5	-1.0	-1.6	-1.5	-1.2	-1.1	-1.5	-1.6	-1.4
4	US	CAN	0.6	0.0	1.0	2.3	0.4	-1.7	1.2	0.9	1.0
5	US	US	0.1	0.1	0.3	0.3	0.5	0.5	0.5	0.2	0.3
6	US	ROW	-1.2	-0.8	-1.3	-1.2	-0.9	-0.1	-0.9	-1.2	-1.1
7	ROW	CAN	1.6	0.7	2.1	3.4	1.6	3.8	2.9	2.0	2.1
8	ROW	US	1.2	0.9	1.4	1.4	1.4	0.0	1.8	1.4	1.3
9	ROW	ROW	-0.1	0.0	-0.1	-0.1	0.0	0.2	-0.1	0.0	0.0

Source: Georges and Mérette (2012).

Table 6. Aggregates impacts

	Welfare Change	Welfare Change (%)	Trade Change (%)
CAN	24188	2.27	7.31
US	19110	0.16	1.42

Source: Georges and Mérette (2012).

Table 7. Current and counterfactual country shares in Canada's import

	Benchmark import shares*	Diversifying to EU	Diversifying to Japan	Diversifying to China	Diversifying to India	Diversifying to ROW
CAN	0.0	0.0	0.0	0.0	0.0	0.0
USA	60.8	50.8	50.8	50.8	50.8	50.8
EU	15.3	25.3	15.3	15.3	15.3	15.3
JPN	3.9	3.9	13.9	3.9	3.9	3.9
CHN	3.7	3.7	3.7	13.7	3.7	3.7
IND	0.5	0.5	0.5	0.5	10.5	0.5
ROW	15.8	15.8	15.8	15.8	15.8	25.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

*Note: Benchmark based on the GTAP 6 database (Dimaranan, B. and R. McDougall, 2005).

Source: Georges, Mérette and Seçkin (2009).