

Economic Impact of the TPP as Negotiated

Shenjie Chen (Global Affairs Canada)

Catherine Milot (Global Affairs Canada)

1. Introduction

Canada's participation in the Trans-Pacific Partnership (TPP) negotiations is an opportunity to advance Canada's commercial interests in the Asia-Pacific region. The twelve countries in the TPP Agreement would form one of the largest trade areas in the world with trade among TPP member countries of US\$4.0 trillion and trade between TPP countries and the rest of the world of US\$5.4 trillion. The TPP countries as a group would be by far Canada's largest trading partner. Trade with other TPP members accounted for 81.1% of Canada's total exports to the world and 65.9% of total Canadian imports from the world.

This study assesses the economic impact on Canada and other TPP members including both developed and developing members based on the final negotiated outcomes of the TPP agreement that was concluded in Atlanta, Georgia, U.S.A. in October 2015.

The economic impact assessment of the TPP was based on simulations with a computable general equilibrium (CGE) model. The CGE model used for this analysis is the Global Trade Analysis Project (GTAP) model with the GTAP database version 9 that is provided and supported by Purdue University, U.S.¹. This model and other versions of the GTAP model family are used widely by many governments, academics and research institutes around the world to conduct assessments of potential economic impacts of their trade liberalization initiatives.

2. The Modelling framework

The study attempts to simulate the economic impact of the TPP by comparing economic performance of all TPP members between a baseline scenario (prior to implementation of the TPP) and a post-liberalization scenario (following implementation of the TPP). The net effect of the TPP on the member economies can thus be quantified as the difference between the two. Both the baseline and the post-liberalization scenario represent snapshots of the economies in 2014, the year in which the latest statistics are available. In other words, this approach ensures that all other macroeconomic forces impacting on the economy such as macroeconomic fluctuations, employment changes, exchange rate shifts, and technological developments are the same for both the baseline and the post-liberalization scenario, thus isolating the effects of the policy change, i.e., the implementation of the TPP.

¹ <https://www.gtap.agecon.purdue.edu/>

In order to determine the economic consequence of the decision by Canada to participate in the TPP Agreement or not, the study will evaluate the economic impact of the TPP by comparing the results of the **two post-liberalization scenarios** with those of the baseline:

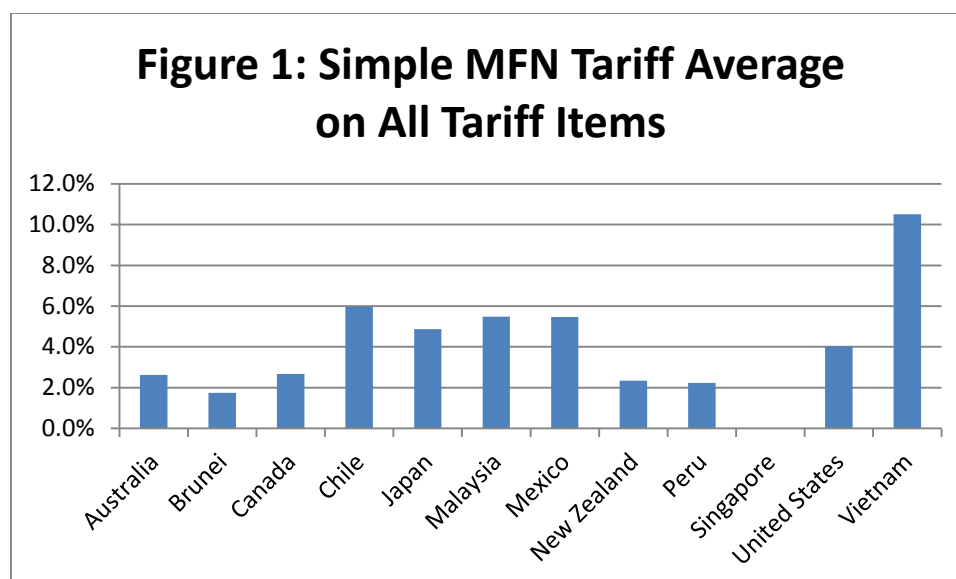
- 1) Canada is a not party to the TPP agreement; and
- 2) Canada is a party to the TPP agreement.

The scope of the modelling analysis covers the effect of liberalization under the TPP for both cross-border trade in goods and services, but due to the limitation of the model, it does not include the analysis of the impact of liberalization and enhanced economic cooperation in other areas such as investment, government procurement, intellectual property, and rules of origin; as such, there could be some under- or over-estimation of the size of TPP gains for Canada and other TPP members.

The database used for this modelling exercise is based on the GTAP database version 9, which benchmarks all bilateral trade flows, trade protection and domestic support to 2011. The tariff data need to be updated to reflect the latest levels of protection in all TPP members since 2011. Since 2011, there have been many bilateral FTA arrangements concluded and implemented among TPP members, such as the Japan-Australia FTA, as well as unilateral liberalization initiatives undertaken in some TPP members. Failure to take into account of these new bilateral and unilateral commitments could significantly inflate the potential gains from the TPP by duplicating the gains that have accrued from existing FTAs among members. For these reasons, substantial effort has been made to incorporate the new bilateral and unilateral commitments among TPP members since 2011 into the baseline scenario. Hence, these new commitments are excluded from the TPP benefits calculation.

The new TPP offers comprise more than 100,000 tariff lines and more than 200 pages of tariff-rate quotas (TRQs) commitments for agricultural products. These tariff lines and TRQs were carefully formulated to fit within the GTAP sector framework. For some countries and some sectors, TPP offers could be less “favourable” compared to the existing bilateral tariff preferences (i.e., the best bilateral preference under an existing FTA is duty-free access, while the TPP offer is a tariff of 2%). For these sectors, the best bilateral offers were used to replace the TPP offers, because in the real business world, businesses are allowed to choose the best tariff schedule available to them to maximize their commercial interest. In other words, for those sectors, we assume that there would be no negative effect from the TPP.

Overall, Canada has lower levels of tariff protections than most of its TPP trading partners (See Figure 1). Hence, at first glance, liberalization under the TPP would be expected to improve Canada’s market access in the TPP partner countries, particularly for those with which Canada does not have an FTA.



Sources: WTO

The economic gains of tariff eliminations or reductions were modelled as allocative efficiency gains stemming from the reallocation of productive resources across sectors caused by the change in relative prices. By contrast, modelling of regulatory barriers, such as barriers to trade in services, is less straightforward. In most FTA analyses, economists have to rely on a simple assumption, such as a 10%-reduction in trade cost related to cross-border services trade, to represent the gains from liberalization in services. For this analysis, the actual TPP offers in services were compared to the commitments under the WTO General Agreement on Trade in Services (GATS) in 1995, or the best bilateral offers. The economic gain in services under the TPP is a measure of income gain resulting from replacing the previously-scheduled limitations with the new obligations under the TPP agreement².

Finally, the modelling results should be considered in the context of both the advantages and limitations of the model, and of CGE models in general. The CGE model can reflect only the expansion of trade in products already traded in the bilateral relationship, and cannot predict the creation of trade in new product areas, which is particularly important when the existing trade relationship is fairly narrow. Hence, the assessment can be expected to underestimate the gains from liberalization.

² Quantifying the impact of trade liberalization in services is much more challenging than is the case for goods. While a comprehensive dataset is available for tariff barriers for goods trade, a similar database on the barriers to services trade does not exist. Moreover, given the fact that barriers to services trade typically are part and parcel of broader regulatory frameworks governing the delivery of services, the extent to which liberalizing measures can reduce the trade-inhibiting aspects of these regulations cannot be measured directly. For this study, the extent of liberalization for services is evaluated through comparisons between TPP offers and the previously-scheduled commitments. The height of barriers in services for TPP countries are drawn from J. Francois, B. Hoekman and J. Woerz, "Does Gravity Apply to Non-Tangibles: Gravity Estimates of Trade and FDI Openness in Services."

For the purpose of this study, the global economy is disaggregated into 57 GTAP sectors³ and 15 regions/economies. These regions/economies include all TPP twelve countries, plus the EU, China and the rest of the world.

3. The Estimated Macroeconomic Impact of the TPP

4. The Estimated Trade Impact of the TPP

5. Potential Impact of TPP on developing countries

According to the World Bank's latest country group definition, among all TPP countries, only Vietnam is considered as a lower-middle income country, and Malaysia, Mexico and Peru as upper-middle income. The rest of TPP members including Australia, Brunei Darussalam, Canada, Chile, Japan, New Zealand, Singapore, the United States are considered as high-income countries⁴.

Smaller developing economies, and those with few FTAs in place or with a limited degree of liberalization to date, are expected to gain most from liberalization under the TPP. For instance, Vietnam's economic activity is projected to increase strongly by 9.1%. Similarly, Malaysia's economic activity is expected to grow by 5.9%. On the other hand, the prospect of economic growth for the other two upper-middle income countries, Mexico and Peru, would be less significant as these two economies' trade is already substantially liberalized. In the case of Mexico, it is facing a similar pressure as Canada—the erosion of NAFTA preferences in the US market, as liberalization of US trade with other TPP members takes away Mexico's existing preferences in the U.S. market.

Among all TPP countries, Vietnam would gain most from liberalization under the TPP. The principal benefit for Vietnam in joining the TPP is an unimpeded market access of labor-intensive products (textile and apparel and leather products) in the US and Canada and other developed TPP members. In return, Vietnam would engage in profound, but difficult, pro-market reforms across its economy, creating a vibrant economic partner of the TPP community. Our modeling analysis suggests that joining the TPP would boost Vietnam's exports of labour-intensive products by an average of 154% with the majority of these products going to the US, Australia, Canada and Japan.

Vietnam's competitive edge in labour-intensive products would be further strengthened by the trade diversion effect created by the agreement, i.e. the expansion of Vietnam's exports of labour-intensive products to other developed TPP members at the expense of China's exports of the same products to these markets. China is in a middle of transformation towards high value-

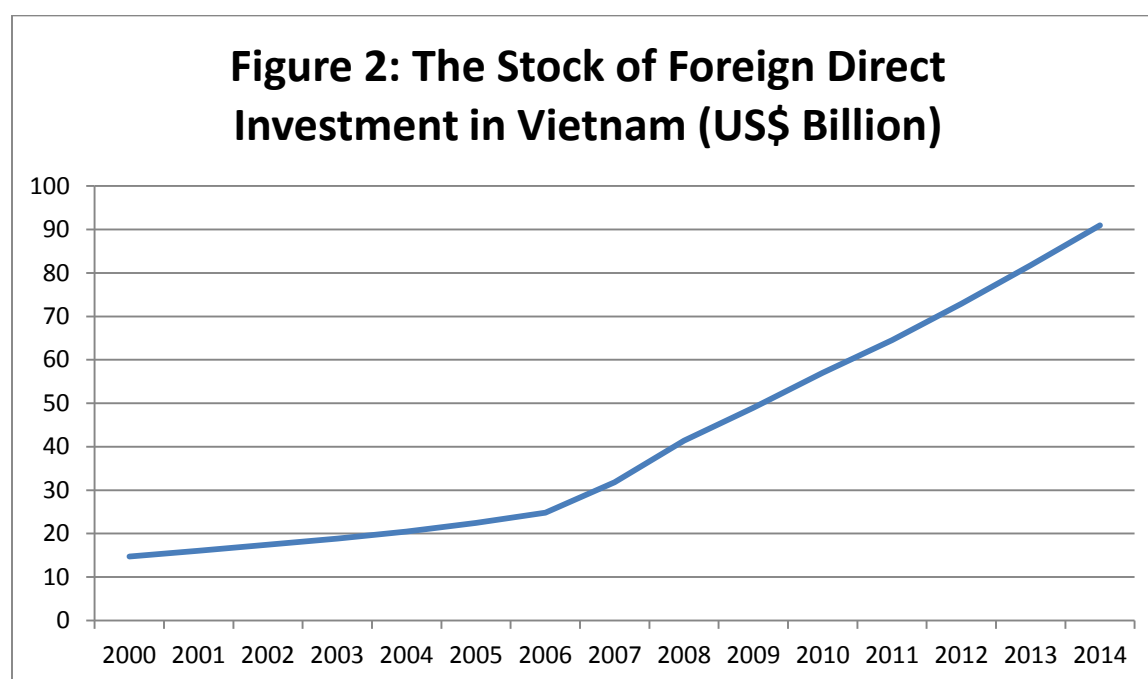
³ <https://www.gtap.agecon.purdue.edu/>

⁴ http://data.worldbank.org/about/country-and-lending-groups#Upper_middle_income

added production, transferring its production of labour-intensive production to low-wage countries, such as Vietnam and Bangladesh, as the country is under the pressure of currency appreciation, rising labour costs and demographic change. The TPP agreement would further accelerate this transformation.

Vietnam would also benefit from a disruption of supply chains in the production of labour-intensive products in East-Asia due to the TPP's "yarn forward" rules of origin for textiles and apparel, which means that all constitutive materials in a textile and apparel product, starting with the yarn and going forward, must be made by a party to the TPP agreement. This approach ensures that the key textile and apparel production processes occur in a party to the agreement. This may encourage non-TPP members to relocate the production process to a member country such as Vietnam. The TPP also includes a short supply list, which specifies materials that are not being produced in commercial quantities in the TPP and can be sourced from non-members, somewhat mitigating the impact of the "yarn forward" rules of origin.

The majority of Vietnam's imports of textile materials come from China and the EU, and to a lesser extent, from South Korea and Taiwan. Our modeling results show that without imposing TPP's "yarn forward" on the existing supply chains in East-Asia, to meet increased export demand from the TPP, Vietnam would need to import a substantial amount of textile materials from China and the EU. Vietnam's imports of textile products from China would increase by US\$3.2 billion (2011 prices) and by US\$ 2.3 billion from the EU (2011 prices). However, with the TPP's "yarn forward" rules of origin, Vietnam's existing supply chains with non-members may shift. The "yarn forward" rule encourages non-members either to join the TPP or invest in Vietnam to meet the "yarn forward" requirement. Indeed, since the start of the TPP negotiations in 2010, foreign direct investment in Vietnam has risen substantially with the majority of direct investment coming from China, Japan, South Korea and Taiwan and Malaysia.



Sources: UNCTAD

This newly-created investment incentive of “yarn forward” rules of origin is important to Vietnam as it provides an additional boost to Vietnam’s economic development; it ensures that the net effect of “yarn forward” rules of origin would be welfare-improving, in the sense that Vietnam would continue to engage the most efficient producers in the world through direct investment in Vietnam, rather than switching to a new source of supply from other TPP members, which are not necessarily the most efficient producers.

This example underscores that the “basic bargain” underlying today’s trade agreement goes well beyond “exchange of market access.” Modern global commerce is characterized by sophisticated chains of manufacture and assembly across multiple countries. Trade agreements could exert a powerful influence on supply chains, and the location decision of production of multinational corporations. The design of rules of origin under the trade agreement has thus become more important, contentious, and complex.