

Trade Implications of the Trans-Pacific Partnership for ASEAN and Other Asian Countries

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The Trans-Pacific Partnership (TPP) aspires to become a state-of-the-art trade agreement linking 12 countries on both sides of the Pacific. In addition to establishing a free trade agreement (FTA) among these countries, negotiators are pursuing a long list of other issues, both trade-related and non-trade related. This paper examines the likely effects of the TPP on trade alone, taking into account the fact that all of the potential members of the TPP are already participants in other FTAs. Using information from the World Trade Organization (WTO) on the existence of these FTAs plus data on the identities of countries' major trading partners for both exports and imports, I discuss the likely effects on a list of countries in terms of trade creation, trade diversion, preference erosion, and "trade reversion"—the reversal of trade diversion that has already occurred due to existing FTAs. The list of countries includes all of the members of the TPP as well as of the Association of Southeast Asian Nations (ASEAN). In addition it includes 10 additional Asian economies that are not part of either.

Keywords: Trans-Pacific Partnership, free trade agreements

JEL codes: F13

I. Introduction

Negotiations have been underway for several years towards the formation of the Trans-Pacific Partnership (TPP), which aims to be a "next generation" or "21st century" trade agreement linking countries on both sides of the Pacific. Originating as the Pacific 4, or P-4 agreement among New Zealand, Singapore, Brunei Darussalam, and Chile, which began in 2006, the TPP negotiations now include the 12 countries indicated in Table 1, with Japan the most recent to join, in 2013. My purpose in this paper is to explore the potential implications of the TPP for its members and for other economies of Asia, especially those who are members of ASEAN and

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Table 1. Economies Considered

	Likely Member of TPP	Actual Member of AFTA
Australia	yes	
Bangladesh		
Brunei Darussalam	yes	yes
Cambodia		yes
Canada	yes	
Chile	yes	
People's Republic of China		
Hong Kong, China		
India		
Indonesia		yes
Japan	yes	
Lao PDR		yes
Macau, China		
Malaysia	yes	yes
Mexico	yes	
Myanmar		yes
Nepal		
New Zealand	yes	
Pakistan		
Peru	yes	
Philippines		yes
Singapore	yes	yes
Republic of Korea		
Sri Lanka		
Taipei, China		
Thailand		yes
United States	yes	
Viet Nam	yes	yes

AFTA = ASEAN Free Trade Agreement, TPP = Trans-Pacific Partnership.

Sources: WTO and USTR websites.

the ASEAN FTA (AFTA). Table 1 lists the economies I will consider, including their membership in AFTA as well as their potential membership in the TPP.¹

The TPP is of interest in part because it is large, mainly due to the presence of the United States (US) and Japan. It is of interest also, however, for two other reasons. First, as a free trade agreement (FTA), it will overlap numerous other FTAs, so that its economic effects are not just the effects that have long been studied for trade agreements that are freestanding, without such overlaps. The economic effects therefore go beyond the simple trade creation and trade diversion introduced by Viner (1950).

The TPP is also of interest because of its ambition to extend well beyond the limits of trade and trade policy, including a host of other issues. Some of these, such as trade in services, technical barriers to trade, and intellectual property, have

¹Their membership is potential, since it is possible that the TPP may never be completed, or if it is, that some economies may not then ratify their membership.

been included previously both in the World Trade Organization and in other regional agreements such as the North American Free Trade Agreement (NAFTA), but the TPP intends to go further in these directions than ever before. At the same time, the TPP negotiators are addressing new issues that have never, or hardly ever, been part of trade agreements, such as competition policy, regulatory coherence, and standards for labor and environment. All of these issues will take most of the included Asian countries well beyond what they have included previously in their existing trade agreements.²

One might object that the TPP is not the most important trade agreement on the horizon that will matter for Asian economies. In 2013, negotiations began between the US and the European Union (EU) on a Transatlantic Trade and Investment Partnership, or TTIP. Although TTIP includes only two partners, the US and the EU, it will encompass a larger part of the world economy than currently envisioned for the TPP. Therefore, while the TTIP will not include any economies of Asia, it will surely matter a great deal for them. That, however, is a topic for another paper. And in some ways, the TPP's overlap with both Asian economies and various existing Asian trade agreements makes it a more interesting case.

I will divide this discussion into three parts. First, in section II, I will provide some description of the TPP itself, including a list of the many issues that are being discussed in addition to tariffs and that may become part of an agreement if and when it is reached. Since my focus in the rest of the paper will be only on the trade effects of the TPP, and since these are influenced by the presence of trade agreements that already exist, I will then, in section III, provide a picture of the relevant agreements involving ASEAN and other Asian economies. Finally, in Section IV, I will use this information together with data on the bilateral patterns of trade to discuss how the TPP might be expected to benefit or harm the countries of the TPP, of ASEAN, and other selected Asian economies.

II. TPP, AFTA, and Other Asia³

Both the TPP and AFTA are, or propose to be, FTAs—that is, the member countries reduce to zero all tariffs on imports from other member countries of all, or almost all, products. Their agreements do not involve any commitments about external tariffs—that is, the tariffs on imports from economies outside the FTA. These typically remain at the levels that they were prior to the FTA, although economies are free to, and often do, negotiate additional FTAs with other economies. To varying degrees, member countries of FTAs also identify “sensitive sectors” in

²Exceptions are Australia and Singapore, whose FTAs with the US do include these issues.

³A referee asks about the purpose of including the economies I've called “Other Asia.” This was done at the request of the journal editors, who wanted implications for the PRC and India, not just ASEAN.

which they do not fully and/or immediately eliminate tariffs. The more trade is covered by these sensitive sectors, the smaller are the economic benefits, and the larger are the economic costs of the FTA, but the smaller also are the internal dislocations that the FTA is likely to cause.

The 10 countries of AFTA include six—Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand—that have already reduced tariffs among themselves to almost zero. The remaining four—Cambodia, the Lao People’s Democratic Republic (Lao PDR), Myanmar, and Viet Nam—because of their lower per capita incomes, were granted a slower schedule for reducing tariffs to below 5%, but they are on track to do so. However, both sets of countries are allowed to exempt sensitive sectors—most significantly rice—from these tariff reductions, so that the fraction of potential trade covered by the FTA is well below what it could have been.⁴

The TPP will also be an FTA, and it seems likely that the tariff reductions among the TPP countries will be more complete and more general than those of AFTA, although that of course remains to be seen. The TPP will also exempt some sensitive sectors, and the negotiations on which sectors those will be, and how many, are already contentious.

In addition to tariffs, both trade agreements include some restrictions on the use of nontariff barriers (NTBs). These are, by their nature, harder to identify and even harder in most cases to quantify, which makes including them in a trade agreement difficult.⁵ The AFTA aspires to eliminate NTBs, but to my knowledge it has not so far made much progress in doing so. The TPP seems likely to achieve much more in this regard, as its negotiation already includes groups addressing such NTBs as customs valuation and procedures, government procurement practices, and sanitary and phytosanitary measures.

As this already indicates, the TPP aspires to be far more than just a trade agreement or an FTA. Table 2 lists the issues that I have seen mentioned as being subject to negotiation in the TPP. I include my own take on what some of these issues entail, while for others, I quote either from the United States Trade Representative documents or from other commentators. Especially for the former, these descriptions reflect only the US position on what should be included in the TPP, although it seems likely that the US will dominate the negotiations, so that these will turn out to be accurate. If the negotiations are successful, it will be the nontrade issues—far more than the tariff reductions—that will transform more than just the trading system, but also the domestic economies, of many of the member countries. And some of these “nontrade” issues will matter for trade as well.

⁴The fraction of actual imports that is covered can of course be very high if the tariffs on sensitive imports are so high as to almost eliminate those imports entirely.

⁵See Deardorff and Stern (1998).

Table 2. **Issues of the Trans-Pacific Partnership (TPP)**

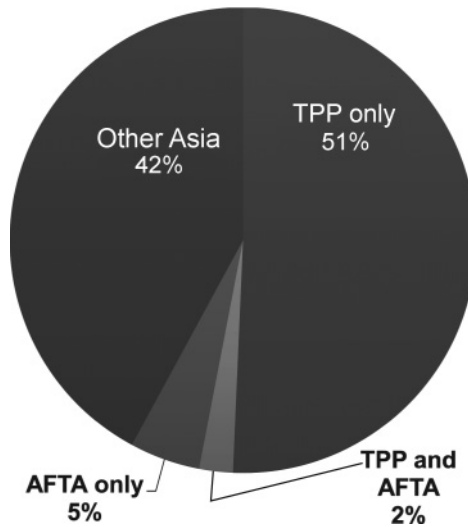
Trade issues	
Trade in goods	
Tariffs	<ul style="list-style-type: none"> • Eliminate tariffs on intra-TPP trade
Nontariff barriers	<ul style="list-style-type: none"> • Harmonize customs valuation rules and procedures • Remove technical barriers to trade • Remove the trade-distorting effects of sanitary and phytosanitary measures • Open government procurement to imports from member countries
Trade remedies	<ul style="list-style-type: none"> • “Build upon (the existing rights under the WTO for anti-dumping, countervailing duty, and safeguards protection) to assure transparency and procedural due process” USTR (2011) • Negotiate a special transitional regional safeguard mechanism for the TPP
Rules of origin	<ul style="list-style-type: none"> • “A common tariff schedule and rules of origin would result in a greater level of trade expansion and potential economic benefits” Krist (2012, p. 15) • “Regional rules of origin will provide new opportunities for Australian exporters to tap into global supply chains.” Government of Australia (2013)
Trade in services	<ul style="list-style-type: none"> • Agree on national treatment for member-country service providers, subject to a “negative list” of exceptions for specific service sectors
Non-trade issues	
Intellectual property protection	<ul style="list-style-type: none"> • Reinforce and extend the protection of patent, copyright, trademark, and other intellectual property protection provided by the TRIPs Agreement of the WTO
Competition policy	<ul style="list-style-type: none"> • “The United States is seeking rules to prohibit anticompetitive business conduct, as well as fraudulent and deceptive commercial activities that harm consumers.” USTR (2014)
Temporary movement of business persons	<ul style="list-style-type: none"> • “Promote transparency and efficiency in the processing of applications for temporary entry” USTR (2011)
Labor rights	<ul style="list-style-type: none"> • The US is “seeking enforceable rules that protect the rights of freedom of association and collective bargaining; discourage trade in goods produced by forced labor, including forced child labor; and establish mechanisms to monitor and address labor concerns.” USTR (2014)
Environmental laws and regulations	<ul style="list-style-type: none"> • “U.S. proposal would create new binding commitments in the area of conservation, such as an obligation to maintain domestic laws or regulations that prohibit trade in wildlife or plants that were obtained illegally, for protection of endangered species and marine fisheries, or to prevent trade in illegal logging.” Krist (2012, p. 13)
Regulatory coherence	<ul style="list-style-type: none"> • The object here is to reform regulatory systems so they can be more compatible internationally, both in terms of what is required and in terms of procedures for demonstrating and certifying compliance.
Digital technologies	<ul style="list-style-type: none"> • “The United States has proposed that TPP countries commit to not blocking cross-border transfer of data over the Internet and not require that servers be located in the country in order to conduct business in that country.” Krist (2012, p. 13)
Financial services	<ul style="list-style-type: none"> • “Commitments to liberalize foreign financial services and insurance markets while protecting a government’s broad flexibility to regulate, including in the financial sector, and to take the actions necessary to ensure the stability and integrity of a financial system.” USTR (2014)

Table 2. *Continued.*

<p>Investment</p> <ul style="list-style-type: none"> • “Provisions to ensure non-discrimination, a minimum standard of treatment, rules on expropriation, and prohibitions on specified performance requirements that distort trade and investment.” USTR (2011) • “. . .several countries are said to favor ‘investor-state arbitration’ provisions for issues involving foreign investments.” Petri et al. (2011) • “. . .provide strong protections to ensure that all TPP governments can appropriately regulate in the public interest, including on health, safety, and environmental protection.” USTR (2014) <p>Issues often mentioned, but not explicitly part of TPP</p> <p>State-owned enterprises</p> <ul style="list-style-type: none"> • “Prevent SOEs from receiving support in the form of regulatory and tax advantages, or access to capital and other inputs at below-market prices” Petri et al. (2011) <p>Currency manipulation</p> <ul style="list-style-type: none"> • “There will also need to be careful wording on ‘currency manipulation’ to please US manufacturers” Pilling (2013)

Source: Author’s inferences from multiple sources, including those cited above.

Figure 1. **Shares of GDP for TPP, AFTA, and Other Asia**
(purchasing power parity, 2012)



AFTA = ASEAN Free Trade Agreement, GDP = gross domestic product, TPP = Trans-Pacific Partnership.
Source: Author’s calculations using data from CIA World Fact Book 2013.

The sizes of the groups of economies in Table 1 are shown in Figure 1. The total GDP of the TPP countries (on a purchasing power parity basis) is almost 10 times that of the AFTA countries, and the countries that are in both are small parts of each. Figure 1 also includes the Other Asia economies from Table 1, for comparison. As a group (which includes both the People’s Republic of China, or PRC, and India), they are only slightly smaller than the countries of the TPP.

Figure 2. Existing FTAs among TPP and Asian Economies

		TPP and not AFTA	TPP and AFTA	AFTA and not TPP	Other Asia																										
		Australia	Canada	Chile	Japan	Mexico	New Zealand	Peru	US	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Cambodia	Indonesia	Lao PDR	Myanmar	Philippines	Thailand	Bangladesh	PRC	Hong Kong, China	India	Macao, China	Nepal	Pakistan	Rep. of Korea	Sri Lanka	Taipei, China		
TPP and not AFTA	Australia																														
	Canada																														
	Chile																														
	Japan																														
	Mexico																														
	New Zealand																														
TPP and AFTA	Brunei Darussalam																														
	Malaysia																														
	Singapore																														
	Viet Nam																														
	Cambodia																														
	Indonesia																														
AFTA and not TPP	Lao PDR																														
	Myanmar																														
	Philippines																														
	Thailand																														
	Bangladesh																														
	PRC																														
Other Asia	Hong Kong, China																														
	India																														
	Macao, China																														
	Nepal																														
	Pakistan																														
	Rep. of Korea																														
	Sri Lanka																														
	Taipei, China																														

AFTA = ASEAN FTA, FTA = free trade agreement, TPP = Trans-Pacific Partnership.
 Source: Author's representation.

III. The TPP in an Environment of Other FTAs

In what follows, I will be particularly interested in the effects of the TPP that arise from the fact that it overlaps with AFTA. That is, TPP will form an FTA with some countries that are themselves already part of another FTA among the countries of ASEAN. From Figure 1, it is clear that the countries within this overlap are small relative to both TPP and AFTA. However, they are just an example of a more common phenomenon where the TPP will establish free trade agreements with countries that already participate in other FTAs.⁶

To see this, Figure 2 shows the economies of Table 1, grouped by their membership or non-membership in the TPP and AFTA. It then shows, for each pair of economies, their current memberships in FTAs (denoted “F”) as reported to the

⁶The TPP has, of course, a much larger overlap with the countries of the North American Free Trade Area (NAFTA). That is not the primary subject of this paper, because of its focus on Asia, but effects on the NAFTA countries will be included.

WTO.⁷ The display shows each pair of economies twice and is therefore symmetric around its diagonal, where economies are paired with themselves and the cells are empty.

The heavy square in the top-left outlines the pairs of countries of the TPP, which if it succeeds will fill in all of its cells with “F.” The lighter square outlines the countries of AFTA, the cells of which are already denoted “F.”

Figure 2 provides the following messages:

- (i) The countries of the TPP are already heavily linked by numerous existing FTAs. Of 66 possible pairs of economies in the 12-country TPP, 40 have FTAs.⁸
- (ii) Four countries—Brunei Darussalam, Malaysia, Singapore, and Viet Nam—are in both AFTA and the TPP. AFTA is only a very basic FTA, and these countries will therefore necessarily be subject to greater economic integration as a result of the TPP.
- (iii) On the other hand, these same four countries are included in FTAs with the other eight countries of the TPP in 17 of a possible 32 pairs, and most of these FTAs appear to include more economic integration than simple FTAs.⁹ This suggests that they may have already committed to some greater integration.
- (iv) Of these four countries, only Singapore has an agreement with the US, which may demand the most rigorous and far-reaching integration.
- (v) The six countries that are part of AFTA but not part of the TPP already have FTAs with three of the non-AFTA TPP countries—Australia, Japan, and New Zealand—negotiated between them and ASEAN as a group.
- (vi) Among the 10 economies included here as Other Asia, three (the PRC, India, and the Republic of Korea) have FTAs with the AFTA countries and at least one with the non-AFTA TPP countries.

Together, these observations make the compelling point that the TPP will interact with a host of other existing FTAs. This fact motivates the discussion of the effects of the TPP in the next section.

IV. Trade Effects of the TPP

Theoretical analysis of an FTA has usually been based primarily on the concepts of trade creation and trade diversion introduced by Viner (1950). Most simply, we imagine a world of three countries that each initially levies identical tariffs on any given good against imports from each of the other countries. Then

⁷Economies report membership in both FTAs and in economic integration agreements. For the current purpose, I am not distinguishing between these, and am coding both as FTAs.

⁸ $12 \times 11/2$

⁹With the exception of the Chile–Malaysia FTA, the rest are reported to the WTO as economic integration agreements.

two of them form an FTA, reducing their tariffs against each other to zero, while continuing to levy tariffs against imports from the third country. In this situation, two possibilities emerge—trade creation and trade diversion:

- (i) Trade creation occurs when a member of the FTA begins to import from its FTA partner a good that it previously produced for itself.

Since it would do so only if the partner produces it more cheaply than it can itself, both would benefit from the exchange in terms of the cost of the country's total consumption.¹⁰ The third country is not affected at all by trade creation, at least in terms of any direct effect.

- (ii) Trade diversion happens when a member country imports from the partner a good that it previously imported from the third country.

Because both countries previously faced the same tariff, we can assume that imports from the third country were due to its lower cost. Switching to importing from the partner country therefore means purchasing a higher cost good. The partner country presumably benefits from this change as an exporter, but the importing country loses due to this higher cost, as does the third country whose exports fall. The loss to the importing country is not visible to consumers, who find the higher-cost product cheaper due to the absence of tariff. But the country as a whole loses, with that loss taking the form of lost tariff revenue.¹¹

The implication of Viner's analysis is that both partners of an FTA may be made worse off by it. Any FTA will inevitably involve some trade diversion, and it is theoretically possible for the economic costs, even to just the member countries, of trade diversion to outweigh both the economic benefits from trade creation and the benefits to exporters of trade-diverted imports. Such a loss may not be likely, but I am not aware of any plausible conditions that will rule it out.¹²

The possibility of a loss for the importing country due to trade diversion was novel and even counterintuitive when Viner explained it, and it therefore has tended

¹⁰This gain, like the gains that arise from multilateral free trade, is a net gain for the country, but involves what can be a considerable loss to some individuals within it. The net gain is based on the fact that those who gain could in principle compensate those who lose and still remain better off. Since this compensation seldom if ever happens, it is precisely this harm to the losers from trade creation that may motivate resistance to the formation of an FTA, or exemption of sensitive sectors. Thus, while trade creation provides the economic rationale for an FTA, it also provides the political resistance to it.

¹¹For the same reasons explained in the previous footnote, it is usually trade diversion, not trade creation, which motivates an FTA politically. Both buyers and sellers perceive themselves to be better off, and they are unaware of the importance of the lost tariff revenue.

¹²My colleagues and I used a computable general equilibrium (CGE) model to analyze quite a number of free trade agreements over the years. To the best of my recollection, only once have we had the model tell us that a country would lose from an FTA, even though our model incorporated the effects of both trade creation and trade diversion. That was in Brown et al. (1997), where we examined a trade agreement between Tunisia and the EU. And even there, it was only under one of several scenarios that we found a loss in welfare for Tunisia, a loss that we attributed to trade diversion.

to play a central role in economists' discussions of the welfare effects of FTAs. However, there is a much more intuitive welfare cost due to trade diversion that is sometimes ignored: to the *outside* country from whom trade is diverted. One does not need subtle theoretical analysis to realize that an FTA harms outside countries to the extent that their exports are reduced. This effect of an FTA is arguably more important than any loss to partner countries, since it is both inevitable and potentially large.

From the world's perspective, by considering the welfare of nonmembers as well as members, then the presence of trade diversion means the FTA is even more likely to reduce welfare. But that loss too is not inevitable, since trade creation benefits the members without harming nonmembers.

Following the Vinerian example, an analysis of the TPP would simply ask how much trade among the TPP countries it will create, and how much it will divert from nonmembers.¹³ Since we are interested here in the effects on Asian economies, most of which will remain outside the TPP, our primary interest will be in the trade diversion from them.

However, as Figure 2 makes clear, the Vinerian analysis misses several important points:

(i) Preference erosion

Many of the Asian economies outside the TPP are already members of FTAs with TPP countries. Their exports to those member countries are already subject to zero tariffs, and therefore neither Vinerian trade diversion nor trade creation can occur due to the TPP. However, the advantage that they secured as exporters, from the zero tariffs with previous FTA partners, will disappear to the extent that TPP gives the same zero-tariff access to other countries.

Many of the countries inside the TPP, including all four of the Asian members of AFTA, are already members of FTAs with individual TPP members. For them too, exports and imports to those members are already subject to zero tariffs, so that again, neither trade creation nor trade diversion will occur. But they too will find the benefits of these previous FTAs reduced by the expansion of preferences to include the additional countries of the TPP.

The above two observations mean that much of the effects—both positive and negative—that a large FTA like the TPP might normally be expected to generate will not in fact occur because of other existing FTAs. At the same time, countries that had benefited, as exporters, from trade diversion within previously existing FTAs will lose some of those benefits.

(ii) Trade reversion

There is, however, also a corollary of the Vinerian analysis that occurs when a country that was previously outside of an FTA of other countries, and thus

¹³It is not sufficient just to quantify these changes in trade. The sizes of tariffs also matter, as does any change in costs as industries expand and contract.

suffered from trade diversion, becomes a member of an FTA with one or more of those countries. It experiences the reversal of previous trade diversion or what I will call trade reversion. That is, a country outside an FTA whose exports were previously diminished by having to compete with exporters within an FTA, by joining that FTA (or one that includes some of its members), will reverse that loss of exports.

In order to get a better idea of how these considerations will matter for individual countries, we need to know something about with whom they trade. For this purpose, I will look only at the top five countries to which each country exports and from which each imports, since these matter most for the effects of changes in its own and other countries' tariffs.¹⁴ Figure 3 shows, for each of our list of economies, the five trading partners to which it exports the most, with the top-ranked trading partner marked "E" and the others "e." Figure 4 shows the same for imports, marked "M" and "m." In some cases, fewer than five trading partners are indicated, when the top five include countries not in our list. Since many economies have the 27-member EU as major trade partners, the tables include this as an additional column. Data are missing for the Lao PDR, probably because it entered the WTO only recently.

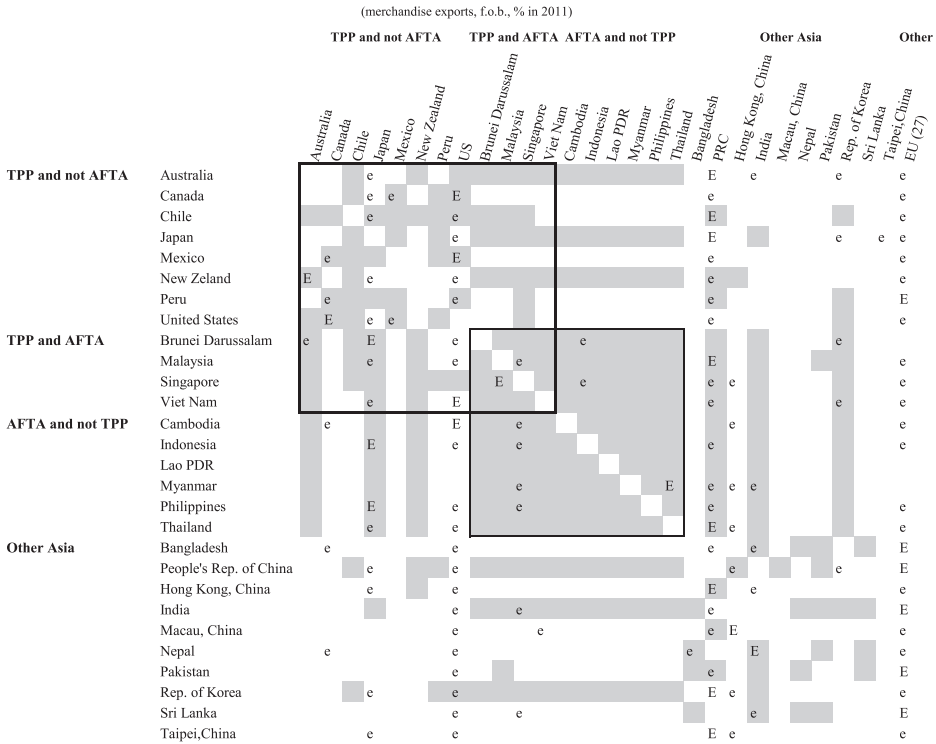
Figures 3 and 4 can be used, together with the information on existing FTAs in Figure 2, to infer how the various economies may be affected by the TPP. For that purpose, cells of Tables 3 and 4 that correspond to FTAs in Table 2 are shaded grey. The following discussion is necessarily not very precise, as it draws only on that information. A more complete analysis would also look at the levels of tariffs that currently exist on the various trade flows and how they will change with the formation of the TPP. All of this information should ideally be incorporated into a proper CGE model of trade among these economies, as well as trade between them and the rest of the world. I do not have the capacity to undertake such an analysis here, but I hope that the following discussion will be suggestive of what a more complete analysis would produce.

Table 3 records the results of this analysis, based on the following observations. First, for any given trade flow, if the importing economy is not part of the TPP, then there will be no direct effect on either the exporter or the importer, since the importer's tariff will not be changed. These trade flows thus do not give rise to any entry in Table 3, with the result that non-TPP economies show no effects via their imports.

Second, again for any given trade flow—and I examine each of the flows recorded as exports to, or imports by, TPP countries—one or more of the four effects identified above will occur, depending on whether the exporting country is part of the TPP and also whether the exporting and importing economies are already in an FTA other than the TPP. Specifically, we have the following:

¹⁴This choice is also motivated by the convenient fact that the WTO reports each member's exports to its top five destinations, at <http://stat.wto.org/>.

Figure 3. Exports to Top Five Destinations for TPP and Asian Economies



AFTA = ASEAN Free Trade Agreement, TPP = Trans-Pacific Partnership, E = Max, e = Top 2-5.

Note: Cells correspond to exports from row to column.

Source: World Trade Organization. Statistics database. <http://stat.wto.org/>

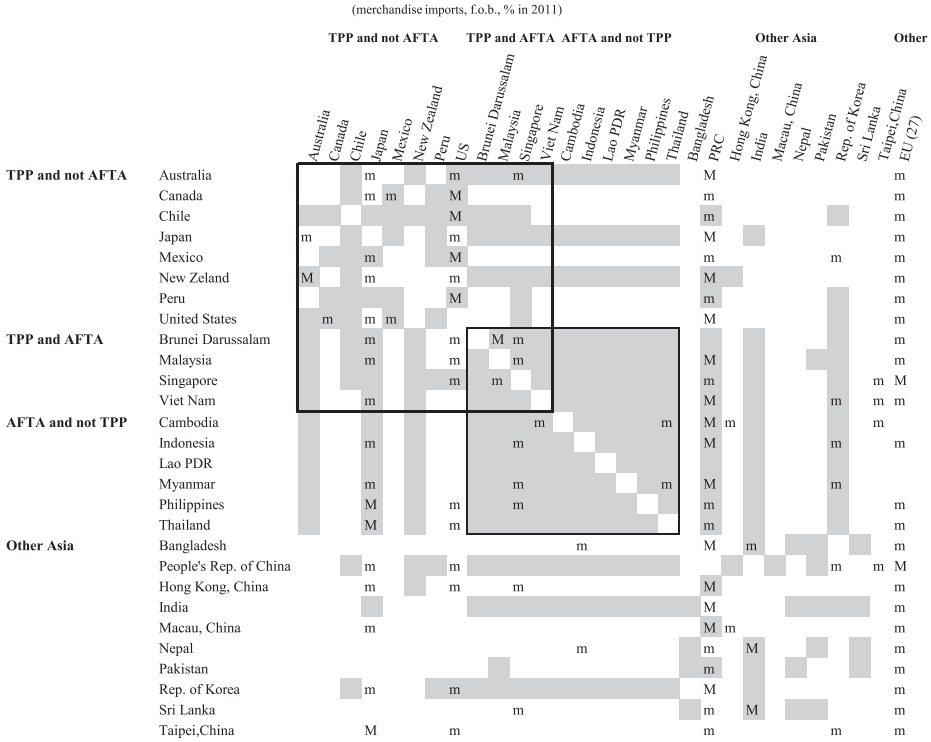
(i) If exporter is in TPP

- If exporter and importer are together in an FTA
 - Exporter loses from preference erosion (-E)
 - Importer gains from trade reversion (+R)
- If exporter and importer are *not* together in an FTA
 - Exporter gains from both trade creation and diversion (+C+D)
 - Importer gains from trade creation and loses from trade diversion (+C-D)

(ii) If exporter is *not* in TPP

- If exporter and importer are together in an FTA
 - Exporter loses from preference erosion (-E)
 - Importer gains from trade reversion (+R)
- If exporter and importer are *not* together in an FTA
 - Exporter loses from trade diversion (-D)
 - Importer loses from trade diversion (-D)

Figure 4. Imports from Top Five Sources for TPP and Asian Economies



AFTA = ASEAN Free Trade Agreement, TPP = Trans-Pacific Partnership, M = Max, m = Top 2-5.
 Note: Cells correspond to imports to row from column.
 Source: World Trade Organization. Statistics database. <http://stat.wto.org/>

Each trade flow from Figures 3 and 4 gives rise to one or more entries in Table 3 indicating gain or loss via the above mechanisms. The reason for the gains and losses are denoted by the letters C, D, E, R, which are uppercase when corresponding to the top-ranked trade flows in Tables 3 and 4, and lowercase otherwise.

I provide a discussion of the impact of the trade agreements on the different groups of countries below.

A. Countries of the TPP but Not in AFTA

1. Australia

Australia’s largest trading partner in both exports and imports is the PRC, with which it has no FTA, and which is not included in the TPP. Indeed, Australia does not have an FTA with any of its top five export destinations, and it has FTAs

Table 3. Gains and Losses Due to TPP via Top Five Trade Flows

	Exports		Imports	
	Gains	Losses	Gains	Losses
TPP and not AFTA				
Australia	c,d		c,r,r	d,D
Canada	c,d	e,E	c,r,R	d,d
Chile		e,e	R,r	
Japan	c,d		c,c	d,d,D
Mexico		e,E	r,R	d,d
New Zealand	c,d,c,d	E	R,c,c	d,d
Peru		e,e	R,r	
United States	c,d	E,e	r,r,c	d,D
TPP and AFTA				
Brunei Darussalam	c,d	e,E	r,c,R,r	d
Malaysia	c,d	e,e	r,c,r,R	d
Singapore		E	r,r	d
Viet Nam	C,D	e	r,R,r	
AFTA and not TPP				
Cambodia		d,D,e		
Indonesia		E,d,e		
Myanmar		e		
Philippines		E,d,e		
Thailand		e,d		
Other Asia				
Bangladesh		d,d		
People's Rep. of China		d,d		
Hong Kong, China		d,d		
India		d,e		
Macau, China		d,d		
Nepal		d,d		
Pakistan		d		
Rep. of Korea		d,e		
Sri Lanka		d,d		
Taipei, China		d,d		

AFTA = ASEAN Free Trade Agreement; TPP = Trans-Pacific Partnership; c,C = trade creation; d,D = trade diversion; e,E = preference erosion; r,R = trade reversion (upper case if from largest trade flow, lower case otherwise).

Source: Author's inference based on Figures 2–4.

with only two of its top five import sources (US and Singapore). The TPP will eliminate Australia's bilateral tariffs with only one of its top trading partners, Japan. From that it will gain as an exporter through both trade creation and trade diversion in Japan. As an importer, on the other hand, while it will gain from trade creation at home, it will lose from any trade that is diverted to Japan from other non-TPP and non-FTA economies. At the same time, as an importer from its FTA partners US and Singapore, Australia will gain when some of the trade that had been diverted to them reverts to other TPP countries. On the other hand, with the PRC as its largest import source, it will lose when part of that trade is diverted to the TPP. Together,

these changes seem likely to be more positive than negative, so that Australia will benefit from the TPP.

2. Canada

Canada currently has only four FTAs with our list of countries, two of them being with the other members of NAFTA, which are also two of its largest trading partners. NAFTA has provided Canada with preferential access to these two countries, especially the US, and part of that preference will be eroded by the TPP, especially with respect to Japan. At the same time, Canada must have suffered from some amount of trade diversion due to the NAFTA, and to the extent that this trade was diverted from other TPP countries, Canada will gain as an importer on this account via trade reversion. Other effects on Canada are similar to those noted above for Australia. Whether Canada stands to gain or lose from the TPP therefore depends mostly on the balance between harmful preference erosion and beneficial trade reversion.

3. Chile

Chile already has FTAs with all but one (Viet Nam) of the other countries of the TPP, including the only two countries within the TPP with which it trades significantly—the US and Japan. Chile's largest trading partner for its exports is the PRC, with which it also has an FTA. Effects of the TPP on Chile should therefore be minimal, though it will be subject, to a very small extent, to preference erosion and trade reversion similar to the effects noted for Canada.

4. Japan

Japan's largest trading partner, for both exports and imports, is the PRC, with which it does not have an FTA. Among the members of the TPP, it trades in a major way only with the US and, for its imports presumably of raw materials, Australia. But its trade with the US is big, and the main effects of the TPP for Japan will be about the same as if it simply formed an FTA with the US alone. The inclusion of other countries in the TPP will prevent this from causing trade diversion from them, but substantial trade diversion is likely from the PRC.

5. Mexico

Mexico is very similar to Canada in both its trading partners and membership in FTAs. The exception is that Mexico already has an FTA with Japan, which is a major source of its imports. The TPP seems therefore unlikely to have any major effect on Mexico.

6. New Zealand

New Zealand, like Australia, is a member of a large number of FTAs, but remarkably these do not include the US. On the other hand, New Zealand does have an FTA with the PRC. Therefore, a major positive effect of the TPP for New Zealand will be its increased trade with the US, while it will not suffer from any trade diversion as it shifts imports from the PRC to the US. On the contrary, the TPP will offer New Zealand the additional benefit of trade reversion—reversing any trade diversion that its FTA with the PRC may have caused vis-à-vis the US. In addition, the TPP will encompass Japan, also a major trading partner of New Zealand in both exports and imports, and with which it does not currently have an FTA. This will generate the usual mixture of trade creation and trade diversion.

7. Peru

Peru already has FTAs with the two TPP countries with which it trades the most—Canada and the US, as well as with another major trading partner, the PRC. It trades little with its southern hemisphere but distant neighbors, Australia and New Zealand, perhaps because these are two of the few industrialized countries with which it has no FTA. The TPP will not have a big effect on Peru, but it should allow these trade flows across the southern Pacific to expand.

8. United States

The US already has FTAs with half the TPP countries, but not with Japan. As noted above for Japan, the largest effect of the TPP will be through the Japan-US trade relationship. This will involve trade diversion away from the PRC and to a lesser extent (since the trade is small) from other non-TPP Asian economies. The exception to the latter is the Republic of Korea, with which the US already has a recently implemented FTA, the trade within which would otherwise be likely to grow over time. The TPP will likely slow that growth. In general, the TPP will cause a rich mix of all four of the effects discussed above, with the balance uncertain as it was for Canada.

B. Countries in both TPP and AFTA

1. Brunei Darussalam

Brunei Darussalam already has FTAs with all of its major trading partners except the US, partly because of its membership in AFTA but also because it has separate trade agreements with Japan, Chile, Australia and New Zealand, the PRC, and the Republic of Korea. Therefore the importance of the TPP for Brunei

Darussalam is its relationship with the US, which is both a major export destination and import source. Its many other FTAs have, to some extent, diverted its trade from the US, and the TPP will correct that. It's hard to see how Brunei Darussalam could other than benefit from the TPP.

2. Malaysia

Malaysia has all of the same FTAs as Brunei Darussalam, plus an additional one with Pakistan. Its trade patterns are similar as well. So the conclusion for Brunei—that it will gain mainly by having an FTA with the US and undoing trade diversion—holds for Malaysia as well.

3. Singapore

Singapore has existing FTAs with the largest number of countries on our list: 18 of a possible 27. Unlike the other countries in the TPP and AFTA group, it even has one with the US. So there does not appear to be much scope for gain (or loss) for Singapore from the TPP. The two countries with which Singapore's trade might expand the most with the TPP are Canada and Mexico, with which it oddly does not currently have FTAs despite their membership in NAFTA.¹⁵ With all of its other FTAs, the trade between Singapore and these two countries undoubtedly suffers from trade diversion. This will be corrected by the TPP, although the effect on any of these countries' welfare seems unlikely to be large.

4. Viet Nam

Viet Nam's configuration of FTAs, and its major trading partners, are largely the same as Brunei Darussalam and Malaysia, except that it lacks an FTA with Chile. One can therefore expect a similar experience for it in that it benefits mainly from acquiring an FTA with the US, which is its largest export destination. Unlike Malaysia and Brunei Darussalam, however, Viet Nam does not import a great deal from the US, so its benefits as an importer will be more muted.

C. Countries in AFTA but Not in TPP

This group includes Cambodia, Indonesia, the Lao PDR, Myanmar, the Philippines, and Thailand. All of these countries have essentially the same configuration of FTAs, in that they are members of ASEAN and the associated AFTA,

¹⁵A referee tells me that Singapore has been negotiating an FTA with Canada and Mexico for many years and suggests that the lack of urgency may signal the perception that trade relations with these countries may be of secondary importance.

and the FTAs that ASEAN has negotiated with other countries (i.e., Australia and New Zealand, Japan, the PRC, India, and the Republic of Korea).

Because these countries are part of AFTA but not part of the TPP, the latter partnership would not be expected to benefit them, and will instead cause some trade diversion away from them, as AFTA countries that are included in the TPP substitute cheaper imports from TPP partners in place of imports from this group of countries. In addition, to the extent that these countries have benefited from the preferences provided by their many FTAs, these preferences will be eroded.

Fortunately, the only country within the AFTA/TPP group that is a major destination for exports from any of these countries is Singapore, and it already has FTAs with all of the TPP countries except Canada and Mexico. Therefore, both the trade diversion and preference erosion, while they will happen, should not be substantial, since it has already occurred.

More serious will be the trade diversion within two of the non-AFTA/TPP countries: Japan and the US. Japan is the top export destination for both Indonesia and the Philippines, while the US is a major destination for these countries as well, and also for Thailand and Cambodia. Indeed, the US is the top export destination for Cambodia. Only Myanmar (and perhaps the Lao PDR, for which we lack trade data) appears to be immune from this effect, as its main export destinations are all, except Singapore, outside the TPP.

I conclude that four of these countries—Cambodia, Indonesia, the Philippines, and Thailand—should expect to be harmed by the TPP, and the Lao PDR may be harmed as well if its trade patterns are similar to these.

D. Other Economies in Asia

These include Bangladesh; the PRC; Hong Kong, China; India; the Republic of Korea; Macau, China; Nepal; Pakistan; Sri Lanka; and Taipei, China. None of the other Asian economies that I selected for this analysis have any countries of the TPP as their top export destinations. On the other hand, all of them have the US as one of their top five destinations, and several of them export significantly to Japan as well. With only two exceptions, none of them have existing FTAs with Japan or the US either, which would temper any trade diversion. The exceptions are India with Japan, and the Republic of Korea with the US. But the US is a top-five destination for India's exports, and Japan is the same for the Republic of Korea. Therefore even these two countries can expect nontrivial trade diversion due to the TPP, although their FTAs with the AFTA members should temper this a bit.

Of special interest, of course, is the PRC. The PRC already has FTAs with the AFTA countries as well as with Chile, New Zealand, and Peru. However, this leaves Australia, Canada, Japan, Mexico, and the US as TPP members with which the PRC has no FTA and where it can expect a decline of exports due to trade diversion.

Indeed, although the PRC's top export destination is the 27-member EU, the US is a close second, and Japan is also in its top five.¹⁶ The PRC would seem to be a major loser from the TPP.

V. Conclusion

As listed in Table 2, there is much more to the TPP than just the tariffs that will mostly be eliminated among the members. My discussion here has dealt only with the effects of those tariff reductions, largely because I find it interesting to consider an FTA in the context of countries that already participate in other FTAs, something that the literature has not taken much account of.

But if the TPP achieves its objective of going well beyond these tariff reductions, it may be that the trade effects will be its least important implications. I had intended, when I undertook to write this paper, to look at the other issues in Table 2, but I have found the analysis of overlapping and interacting FTAs to be more than enough to keep me busy.

I would hope, nonetheless, those other issues would be given due attention. I suspect that some of them will offer far greater benefits to the participating countries than the trade effects that I have discussed here. I also fear that some of those issues will prove problematic, and that they could undermine the benefits that this “state-of-the-art” trade agreement could otherwise provide.

As for the effects of tariff cuts considered here, the main message of this analysis is that these are more complex and interesting than the simple analytics of trade creation and trade diversion introduced by Viner (1950). When new trade agreements overlap existing ones, as the TPP and others inevitably will, given the proliferation of FTAs that already exist, two additional effects—preference erosion and trade reversion—need to be considered as well. All four of these effects appear for most of the countries considered here, especially those in the TPP itself, usually precluding any simple determination of gain or loss. But the analysis does tell us more about where to look for these effects than we might have understood previously.

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¹⁶I have not reported the amounts of trade in Tables 5 and 6. But the underlying data show that 18.8% of the PRC's exports go to the EU, 17.1% to the US, and 7.8% to Japan.

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