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**Working Paper**

## Implications of a Philippine-US free trade agreement on trade in goods: An indicator approach

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## Implications of a Philippine-US Free Trade Agreement on Trade in Goods: An Indicator Approach

*George Manzano and Kristine Joy Martin*

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# **EAST ASIAN DEVELOPMENT NETWORK**



**EADN WORKING PAPER No. 87 (2015)**

## **Implications of a Philippines-United States Free Trade Agreement on Trade in Goods: An Indicator Approach**

**(September 2014)**

**George Manzano  
Kristine Joy Martin**

Implications of a Philippines-United States Free Trade Agreement on Trade in Goods:  
An Indicator Approach

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## Implications of a Philippine-US FTA on Trade in Goods: An Indicator Approach

The Trans-Pacific Partnership (TPP) is a regional free trade agreement (FTA) initiated by the United States (US) and is presently being negotiated among 11 countries. With the Philippines negotiating in many fronts at the global scene--such as its engagement in the ASEAN Economic Community and in the forthcoming European Union-Philippine FTA, among others--the invitation to join the TPP is another opportunity worth studying. In the departure from the prevalence of the computable general equilibrium models in estimating the effects of the TPP on prospective partners, this study will use an alternative methodology, the Sussex framework. It aims to complement the existing works of other researchers in the field. This paper furthermore will focus on analyzing the (1) possible impact on Philippines-US trade in goods in joining the TPP agreement, as well as the (2) probable negative effects that could befall the country if it were not a member of the TPP once the agreement is completed. More specifically, to analyze the impact of the TPP on Philippine-US Trade in Goods, the study will model the TPP as a collection of bilateral US-TPP partner FTAs. The relevant indicators generated from the series of bilateral FTAs will then be interpreted in the context of how these would impact on the Philippines as a third, nonpartner country.

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Keywords: TPP, Free Trade Agreement, Philippines-US Trade, Sussex framework



# CHAPTER 1

## Introduction

### 1.1 Background: Why does the TPP matter?

The Trans-Pacific Partnership (TPP) agreement is the modern “21<sup>st</sup> century agreement.” Amidst the shift from global to regional negotiations; a world economy that is becoming multi-polar; international linkages that are becoming increasingly complex; and past agreements that have eliminated many of the most tractable trade barriers, comes the desire to make a golden-standard agreement that expressly addresses new and emerging issues in the 21<sup>st</sup> century. In an overview of the Trans-Pacific Partnership, dubbed the precursor to a new landscape of Asia-Pacific integration, Petri and Plummer (2012) described it as the rescue from a world trading system that is currently “on the rocks” because of some failures of the Doha Development Agenda.

Like many regional initiatives, the TPP started with just a handful of “like-minded” members. Since the start of the 21<sup>st</sup> century, regional trade agreements have been on the rise (Figure 1.1). In 2005, four countries composed of Brunei, Chile, New Zealand, and Singapore started the Trans-Pacific Strategic Economic Partnership of P4, with the goal of eliminating the tariffs between the parties. With the entry of the United States (US) to the negotiations, the P4 expanded to be the TPP which is a regional Free Trade Agreement (FTA) presently being negotiated by countries including the United States, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, and recently, Japan. Since then, negotiations revolve around points based on existing high standard US FTAs (i.e., US-Korea FTA). With the aim of eliminating barriers behind the usual trade borders, international trade and investment conduct is expected to change. A pathway to the realization of a comprehensive Free Trade Agreements within Asia-Pacific is yearned to be paved (Petri and Plummer, 2012).

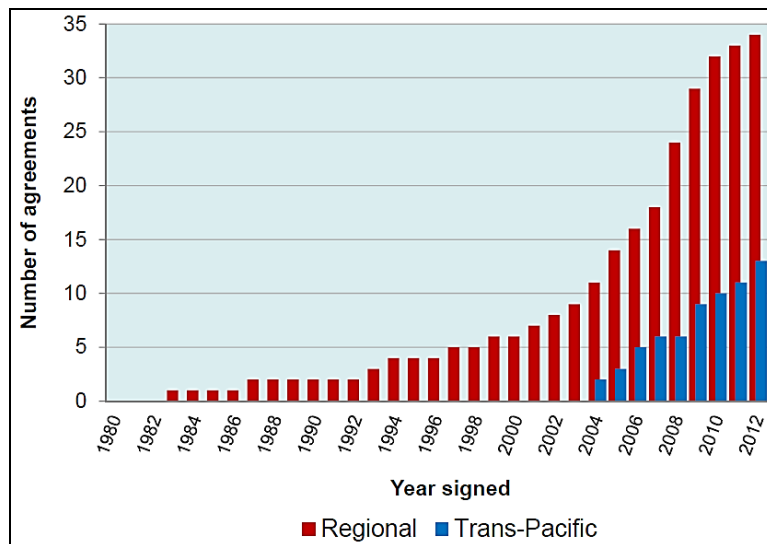


Figure 1.1. Trend in Asia-Pacific Trade Agreement.  
Source: Petri and Plummer, 2012.

Particularly, the TPP is perceived to create a “modern template—an alternative to a strong global agreement—for economic partnership” (Petri and Plummer, 2012) by covering issues such as Government Procurement, Health and Safety Regulations, Intellectual Property, Fair Competition with State-Owned-Enterprises, Supply Chain Management, and Regulatory Due Process (Barfield, 2012). It also tackles the development of the internet and other new technologies, the rising consciousness regarding the linkage of environment and trade and the increasing importance of services in trade (Tibung, 2013).

By being more comprehensive than current World Trade Organization (WTO)-based agreements, the TPP also has the potential to be a transformative model trade agreement through stronger enforcement mechanisms. With it comes innovation of products that lead to higher standards of living and improvement in quality of life of citizens worldwide through the combination of market-based free trade and robust intellectual property rights. To achieve this, the TPP could not be a “bronze-standard agreement” but a “gold-standard” one that avoids mercantilist practices. Developing a gold-standard agreement requires adherence to very high standards such as elimination of non-tariff barriers “including standards manipulation” and substantial conventional tariff reduction (Ezell, 2012).

By spanning the entire Asia-Pacific, it could also help sort the current “noodle bowl” of agreements in the said region because of overlapping rules of origin (Figure 1.2). These agreements are illustrated in the figure below. Moreover, the TPP is seen as a “formidable trading bloc that can unleash the massive growth potential of lesser-developed member economies, such as Vietnam and Peru, as well as cement the economic leadership of advanced countries, like the US and Japan” (Makati Business Club, 2013).

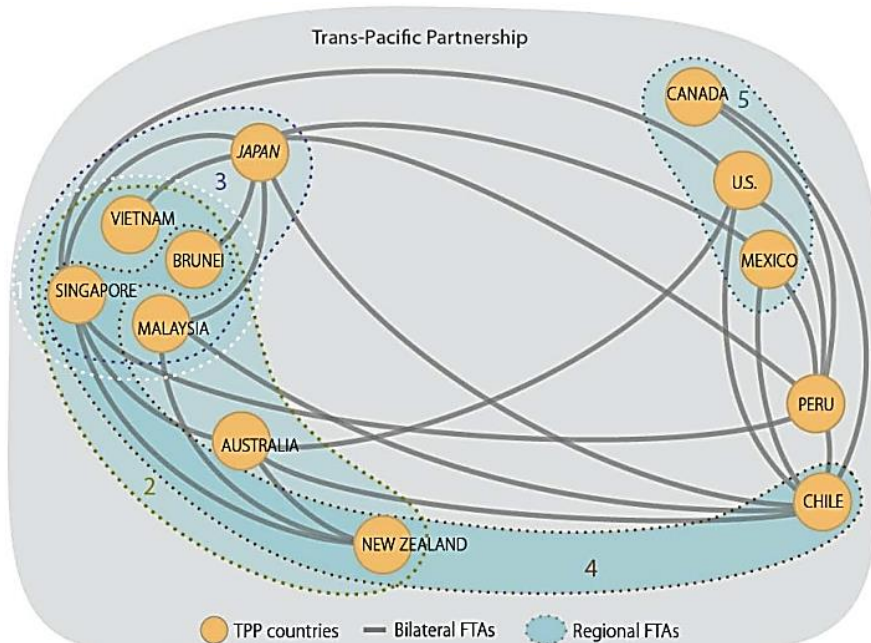


Figure 1.2. Existing FTAs among TPP countries.  
Source: Congressional Research Service in The Washington Post.

Its promising capability of yielding an annual global income of \$295 billion, which accounts for 40 percent of the global domestic product, is currently gaining a lot of attention among the non-participant nations (Embassy of the Philippines, 2013). Also, it is foreseen to lead to an integration of the Asia-Pacific region that is much deeper than the coverage of the current Asia-Pacific Economic Cooperation (APEC). By preventing “a line in the middle of the Pacific,” the grand prize could be greater commercial diplomacy or a possible Free Trade Area of the Asia Pacific (FTAAP). The FTAAP has potential gains of \$1.9 Trillion (Baker, 1989 in Petri et.al.).

If benefits are promised to the participants, economic loss then threatens the non-TPP countries as suggested by Cheong’s (2013) study. Using the GDyn, a recursive dynamic computable general equilibrium (CGE) model developed by the Global Trade Analysis Project (GTAP), he estimated the economic impact of the TPP implementation to member and non-member countries. According to him, member countries will absolutely gain but the magnitude of the benefit actually depends on the number of the countries that will join. Non-TPP Association of Southeast Asian Nations or ASEAN members, on the other hand, will surely face economic losses due to trade diversions. Particularly, he named Thailand, Indonesia, and the Philippines as the biggest losers under the expansion of the TPP.

With the Philippines negotiating in many fronts of the global scene—such as its engagement in ASEAN Economic Community (AEC) and in the forthcoming EU-Philippine FTA—the invitation to join the TPP is another opportunity to be considered. However, before the country takes such invitation, it is important to first gain different views on the merits and demerits of joining the TPP. In this light, this study aims to provide an overview of the economic implications of a possible Philippine-US FTA on goods if and when the Philippines joins the TPP.

## **1.2. Objectives and Significance of the Paper**

With the forthcoming TPP agreement, determining whether the Philippines should join an agreement is an issue raised by many. Some suggest that the immediate cost of being excluded from the agreement would have a significant impact on the country. Nevertheless, how significant the impact would be is an issue that still needs to be studied further. Hence, the ultimate objective of this study is to complement previous researches by providing measures that could give an indication of the possible economic impact of participating in or being excluded from the agreement. It specifically focuses on the impact on the Philippine-US trade in goods. In this light, the analysis is divided into two parts. The first part discusses the implications of having a PH-US FTA while the second part focuses on not having an FTA.

### *Case 1: Implications of an FTA between the Philippines–US in bilateral trade in goods, in the context of a TPP*

This case looks into the bilateral trade in goods between the Philippines and the US, in case an FTA arises. Assessing the possible merits of such FTA could be given by indicators

distinguishing the economic structures of the two countries. The first part, therefore, aims to give a picture of the similarity or complementarity of the trade structures of Philippines and the US. The adjustment costs are presumably higher when the partners have trading sectors, which are competitive or similar. On the other hand, partners that have complementary economic structures should potentially have less clashes in the negotiations as the expected displacement from FTA induced competition is relatively less. Furthermore, the analysis is carried out at the more detailed commodity classification in order to determine the potential commodities that could be a part of the negotiating list of the Philippines in the Philippine-US FTA.

### Case 2: Implications of PH-US bilateral trade in goods, if the Philippines does not join the TPP

Of course, there are disadvantages if the Philippines will not form an FTA with the US especially since the latter is a major trade partner of the former. The second part of the analysis aims to estimate the possible preference erosion that may happen at the expense of the Philippines. If the TPP pushes through without the Philippines, then the US may prefer the TPP members over the Philippines as suppliers of their imports, thus, threatening the market access of Philippine goods which are presently dutiable in the US market. This threat would be more alarming if the trade structures of the TPP members and the Philippines are similar and therefore competitive. Also, similar to the first case, the level of analysis is also made at the more detailed classification. This determines the potential list of sectors that may be negatively affected due to the exclusion of the Philippines from the TPP from the perspective of PH-US trade.

### **1.3. Scope and Limitation**

Understanding trade interests and formulating negotiating stances and positions can be quite complex and multifaceted. Admittedly, there are as many interests as there are stakeholders. In the process of identifying the Philippines' offensive and defensive interests, the study limits itself to only economic factors, leaving behind political, strategic, and other non-economic considerations.

The scope of the study is also restricted within the relationship of the Philippines with the US. From a strategic angle, an analysis of the different FTAs and economic partnership agreements (EPAs) of the Philippines (particularly the FTAs and EPAs with Japan, and South Korea and with ASEAN Taipei can give indication on the extent the Philippines can free up its trade with external partners. The dynamics of the FTAs are not included in the analysis.

Also, this study only covers the trade in goods aspect component of an FTA. Although the TPP is a comprehensive agreement, one that encompasses other broad sectors such as services and investments, these aspects are not covered in the analysis. The trade in goods included in the analysis is classified using the Harmonized System (HS) 1996 since it is the classification common to all TPP members and the Philippines.

Another limitation of the paper is that it does not address non-tariff measures (NTMs) but limits the trade barriers to tariffs. The Sussex framework on the effects of an FTA is generally subsumed into two broad categories; shallow and deep integration effects. Shallow integration

refers to the impact that arises from the removal of tariff barriers to trade while deep integration indicates the effects of the removal of non-tariff measures (NTMs) and/or the harmonization of regulatory provisions. Such deep integration effects are harder to grasp since they entail intense institutional cooperation between countries and involves multifaceted dynamics. In this light, this study deals with tariff barriers only.

Lastly, the analysis used in the study is static. This means that it does not take into account future changes in the supplying capacity of the bilateral partners as a result of technology changes or investments over time. For these reasons, the study could be considered as having a short-term perspective.

## **CHAPTER 2**

### **Review of Related Literature**

This section is divided into four topics. The first part discusses the studies made on TPP, specifically the estimations of its impacts on TPP members and non-members. The second topic focuses on the Sussex framework and how it is used in different studies. The third part meanwhile provides other approaches and methodologies that have been adopted in analyzing the implications of prospective FTAs. Finally, the last part gives this paper's contribution in the light of the existing literature about the subject.

#### **2.1. On TPP**

Estimations of the possible economic impact of the creation of region-wide FTAs had been a subject of many studies. Particularly, the interest lies on a free trade agreement that will create large trading blocks in East Asia and Asia and the Pacific. Urata and Kiyota (2005), among others, investigated the economic impacts on trade patterns of an East Asia FTA on East Asian nations through a simulation using the Global Trade Analysis Project (GTAP) model developed by Hertel in 1997. They found out that although an East Asia FTA would bring positive impacts on East Asian nations in terms of economic welfare and growth, it would have small impacts on the trade patterns within the region.

Kitwiwattanachai et al. (2010) also employed a CGE model on analyzing the economic impacts of an alternative East Asia FTA on Thailand. He examined and compared the relative impacts on Thailand's poverty and income distribution of four East Asia FTA options namely ASEAN-China, ASEAN-Japan, ASEAN-Korea, and East Asia FTA. Their simulations suggested that the East Asia FTA would be the most desirable in alleviating poverty and in distributing income in Thailand.

Recently, the focus of international trade researchers shifts to examining the economic impacts of the emerging track of trade agreement in the Asia Pacific—Trans-Pacific strategic economic partnership. Petri, Plummer, and Zhai (2011) estimated the effects of the TPP on world economy in 2010 to 2025 using the GTAP model. They discovered that the benefits from TPP would be insignificant in the first few years of the simulation. However, they forecasted that by 2025, the annual welfare gains from the TPP would increase to \$104 billion and the Gross Domestic Product (GDP) growth of the countries involved would be 2-3 percent. He furthermore suggested that Asian countries, such as the Philippines, can gain 4.6 percent growth in GDP if there is an Asia FTA track developed from the TPP track.

In a more recent study, Petri and Plummer (2012) measured the possible income and export gains of Asian countries and other countries in the Pacific given the trade agreements such as the TPP and other trade agreements in Asia which they collectively termed as Asian tracks. They generated baseline projections for 2010 to 2025 without the said agreements, and then compared these to simulations for income and exports should the agreements push through. They also simulated possible effects for an FTAAP which, according to them, could commence in 2020 should the TPP and Asian tracks be successful. Should Asian countries like the Philippines join only the Asian tracks and not the TPP, this will lead to negative impacts on both

income and exports, at -0.35 percent and -1.2 percent respectively for the Philippines. With the FTAAP in place, which would only come after countries join both the TPP and the Asian tracks, the Philippines could gain up to 4.95 percent more income and 16.7 percent more exports compared to the baseline. For all countries, annual benefits could range from \$1.3 trillion to \$2.4 trillion. Also, they warned of greater incentives to join the agreements earlier on as these will definitely lead to further growth.

Todsadee, Kameyama, and Ito (2012), on the other hand, used the General Equilibrium approach in examining the impacts of the recent East Asia FTA option—the 2005 Trans-Pacific Strategic Economic Partnership. They specifically focused on the welfare and growth effects of the agreement on the new members—Japan, Korea and China. The Trans-Pacific Strategic Economic Partnership (TPSEP) is in fact the basis of the Trans-Pacific Partnership. TPP is just an expansion of the former agreement. The results of their study showed that the new members would benefit from the welfare and growth effects of the agreement but not from the TPP agreement itself.

Meanwhile, Cheong (2013) addressed the interest on what will happen to the non-member countries. Using the GDyn, a recursive dynamic CGE model developed by the GTAP, he assessed the economic effects of Trans-Pacific Partnership to the member countries in the agreement and to the non-members. Based on the results of his study, member countries will absolutely gain from the agreement. However, the magnitude of the benefit would actually depend on the number of the countries that will join. The more countries involved, the higher will be the benefit to the members. On the other hand, the non-TPP members, particularly ASEAN countries, will surely face economic losses due to trade diversion effects. The study further identified that Thailand, Indonesia, and the Philippines to be the biggest losers given the expansion of the TPP. Hence, it is emphasized that these countries would likely to insist on strengthening the centrality of ASEAN and promoting the Regional Comprehensive Economic Partnership (RCEP) as a major policy option.

Most recently, Cororaton and Orden (2014) made a cost and benefit analysis specifically for the possible Philippine participation in the TPP using the GTAP model. Assuming a 10-year reduction in tariffs and non-tariff barriers from 2015 to 2024 due to the TPP, they illustrated three possible scenarios including the following: (a) Philippines as a non-TPP member; (b) the Philippines as a TPP member but without foreign direct investment (FDI) inflow effects on the country; and (c) the Philippines as a TPP member with FDI inflow effects. Should the Philippines not join the TPP, there will be an opportunity loss of \$0.01 billion annual decline in exports starting 2015 due to trade diversion. On the other hand, by joining the TPP, the Philippines could gain an annual \$0.3 billion increase in exports which could even reach \$3 billion in 2024 due to trade creation. However, in the last scenario wherein there will be FDI inflow effects to the Philippines through the TPP, the export effects will be slightly smaller due to an annual 0.1 percent exchange rate appreciation starting in 2015.

Another unique contribution of the said paper is the identification of particular sectors that will be affected by Philippine participation in the TPP. For example, in the case where the Philippines will be excluded from the TPP, the textile and wearing apparel, petroleum, construction, services, and equipment sectors will be most adversely affected. On the contrary,

being included in the TPP will benefit the Philippine textile and wearing apparel sector, as well as the services, petroleum, utilities, and chemical sectors. These benefits, however, come at the cost of other sectors like agriculture, mining, food manufacturing, metal products, and transport equipment and machinery due to greater competition from imports.

In sum, researches using GTAP conclude that TPP is desirable especially for TPP members, as it will promote significant gains in trade and economic growth. This would be more likely if there are a greater number of countries joining the agreement. On the other hand, for the non-TPP members, positive indirect effects can also be expected. It is interesting that special attention is given on Asian countries, which are not included in the agreement. They suggest that if an Asia FTA track has not been developed, the TPP will be a grave threat to Asian countries since they have the highest probability of suffering from possible trade diversion. Specifically, Thailand, Indonesia, and the Philippines are identified as the underdogs under the expansion of the TPP. Nevertheless, it should be noted that these Computable General Equilibrium studies only consider the economic aspects of the agreement and not the political ones.

## **2.2. On the Sussex Framework**

Studies examining prospect FTAs usually use different trade indicators. An example of an indicators-based study is the Inputs to the Philippine-European Union Free trade Agreement (Manzano, 2012). The study uses two trade indicators to evaluate the implications on the Philippines trade with EU of a future FTA. They are Balassa's Revealed Comparative Advantage (RCA) and Finger-Kreinin Index (FKI). The paper employed standard and bilateral RCA (SRCA and BRCA, respectively) indices to provide a preliminary appraisal of the competitive landscape between the Philippines and EU. The SRCA is the comparative advantage of the country relative to the world while the BRCA is the RCA of the country relative to its bilateral partner. To further extend the analysis, the study proceeded to measure the extent of trade complementarity between the two potential partners through the use of the FKI. The paper found out that using the SRCA, the Philippines has comparative advantage in more sectors in the agricultural/food rather than in non-agricultural. The EU, on the other hand, has more sectors in manufacturing than in agriculture where standard measures say it has comparative advantage. In terms of BRCA, the Philippine's bilateral comparative advantage with EU appears to be skewed towards the agriculture/food sectors while the bilateral RCA of EU with the Philippines lies mostly in its manufacturing sectors. The complementary BRCA's of the two countries are consistent with the calculated FKI.

These trade indicators are organized and aligned in the Sussex framework. This framework provides Rules of Thumb grounded on trade theory. The said framework could help analyze the possible implications of being part or being left out of FTAs using indicators like the trade concentration index (TCI), the magnitude of tariffs, revealed comparative advantage (RCA), intra-industry trade (IIT) and the Finger-Kreinin Index (FKI). These indicators compare the tariff and trade structures between prospect partner-countries to show whether an FTA will enhance welfare. For example, Gonzales, et al. (2012) used the Sussex framework to evaluate the impact on Bangladesh of signing FTAs with China, India, and Turkey. Upon looking at the tariff and trade structure of Bangladesh with China and India, which are both important source of



Bangladeshi imports, it was found that although inter-industry trade already exists because of differences in comparative advantages, greater value chain activity could still be explored through an agreement especially in the more sensitive sector of textile and garments. On the other hand, in the case of Turkey, since it is not an important source of Bangladeshi imports, it was suggested that signing an FTA might lead to trade diversion by displacing more efficient local producers. This was also supported by results showing that the exporting structures of Bangladesh and Turkey are quite similar.

The same study used the Sussex framework to assess the welfare impacts on Bangladesh of FTAs between the EU and India or Vietnam. With the EU as an important export market, there might be great losses for Bangladesh should trade diversion occur. Despite the favorable treatment that Bangladesh receives from the EU, the preference margin that it receives over India and Vietnam are relatively low, which means that on the aggregate level, possible FTAs between the EU and these countries may only lead to minor threats. However, upon comparing the trade structures of the three countries, they have the products with the same comparative advantage. On a disaggregate analysis, Bangladeshi exporters of products in overlapping sectors might be greatly affected.

Evans, et al. (2007) also used the Sussex framework as one of the methods of determining the implications of the Transatlantic Trade and Investment Partnership (TTIP) on low-income countries (LICs). An aggregate analysis indicates that the products exported by the LICs to the EU and US are different from the products exported by the EU to the US and by the US to the EU. The difference in export structure plus low average tariffs denote that trade diversion at the expense of an LIC is unlikely to be very significant. Disaggregate analysis, on the other hand, focused on the competitiveness of products exported by the LICs and the respective tariffs that these products receive. Out of the 43 LICs included in the study, majority of exports to the EU and US came from Bangladesh, Pakistan, Cambodia, and Ghana. In the case of these countries, competitiveness position outweighs the threat of trade diversion losses from the TTIP. However, in the case of the other 39 LICs, tariffs on their products are low but so is competitiveness. As a result, they may face some potential disadvantages from the successful completion of the TTIP.

### **2.3. Other approaches**

Using RCA analysis to determine the complementary or competitiveness of two countries is also adopted by other authors in the context of FTA partnerships. Although this is a young branch in trade literature, RCA has already been used as a tool to analyze potential FTAs, evaluate FTA proposals and improve existing FTAs. One of the first attempts to relate the comparative advantage to export patterns is done by Yue (2001). Yue uses the RCA index to show that China changes its export pattern to coincide with its comparative advantage and that the export patterns in the coastal regions and interiors of China differ. Bender and Li (2002), on the other hand, study the structural performance, changes in export patterns and revealed comparative advantage of the East Asian and Latin American regions within the 1981-1997 timeframe. It tries to examine whether a relationship exists between changes in export pattern

among different regions and shifts in comparative advantage between regions. The Vollrath (1991) index, which captures double counting in world trade, has been used for their analysis.

Ferti and Hubbard (2002) evaluates the competitiveness of Hungarian agriculture relative to EU using 4 indices of revealed comparative advantage, namely, the original Balassa index, relative trade advantage, relative export advantage, logarithm of the relative export advantage, and relative competitiveness. The classification of indices as cardinal (identifies the extent to which a country has comparative advantage/disadvantage), ordinal (provides a ranking of products by degree of comparative advantage), and dichotomous (a binary type demarcation of products based on comparative advantage/disadvantage) has been considered in their study. The results show that the “indices were less cardinal in identifying whether Hungary has a comparative advantage in a particular product group, but were useful as a binary measure of comparative advantage.”<sup>1</sup>

Leu’s paper (1998) examines the systematic shift of comparative advantage in East Asian economies. Its results show that the relationship between comparative advantage and the level of development remains true. Batra and Khan (2005) test the complementarity or competitiveness between China and India using the standard Balassa RCA measure. They found out that in spite of the similarity in structure of the countries’ comparative advantage, the degree of competition, nonetheless, shows that there is no correlation between the manufacturing sectors of India and China in the global economy. Meanwhile, a complementary relationship between the two markets exists in the labor and resource intensive sectors.

One of the studies using RCA to evaluate a prospect FTA includes the Korea-Chile FTA study. The study uses the Balassa RCA to determine the export lines to be liberalized in a potential FTA between Korea and China (Tradesift, 2012). The study first asserts that the success in trade negotiation requires the preparedness of each partner in accepting increased imports in many types of goods. Thus, from the standpoint of a negotiation, success is most likely achieved when the partners do not hope to expand exports in the same industries, i.e., when the partners differ in comparative advantage. Based on the results, Korea and Chile have complementary market structures with the Republic of Korea having strong comparative advantage in manufacturing while in agricultural products. Consequently, liberalization would most likely expand trade along the complementary export lines with comparative advantage (ADB, 2008).

Such approach can be used not only between two countries drafting an agreement but as well as between two regions. This is done by the European Commission (EC) and EU-ASEAN Vision Group in 2006 on their qualitative study of the EU-ASEAN FTA (Consortium of Euro-Asia Centre, University of Limerick and Institut Français des Relations Internationales, 2006). This study concluded that the commodities with bilateral comparative advantage of the two regions are complementarity in nature. Hence, “Enhancing EU-ASEAN economic linkages is both possible and desirable, and the potential economic gains from further developing trade and

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<sup>1</sup> I. Ferti and L. Hubbard. 2002. *Revealed comparative advantage and competitiveness in Hungarian agri-food sectors*. Discussion paper series, Institute of Economics, Hungary Academy of Sciences. P. 14

investment flows between the two regions are many and diverse. This is because the two partners are rather complementary.”<sup>2</sup>

The ASEAN-India FTA study conducted by Ramphul (2012), among others, examines the said agreement using RCA measures to propose improvements on the partnership. The paper uses the Lafay’s index to draw implications on the comparative advantage of India relative to EU. Lafay’s (1992) measure as compared to Balassa index includes both exports and imports in the estimation of the comparative advantage as well.<sup>3</sup> Lafay’s index is preferred by the study in order to capture the intra-industry trade flows which have become a feature of the majority of industries. It can also control the distortions due to the macroeconomic fluctuations and can weigh each product’s contribution according to the respective importance in trade. The results of the study suggest that in the context of competition between ASEAN countries and India, India’s comparative advantage is below that of the ASEAN countries. Thus, in order to benefit from the ASEAN-India Free Trade Agreement in goods, there is a need for India to enhance its competitiveness.

The importance of determining the comparative advantage in the context of an FTA is highlighted on ADB’s Manual for Free Trade Agreements (ADB Office of the Regional Cooperation, 2008). It provides guidelines in designing, negotiating, and implementing FTAs in Asia and even included the case study of Korea-Chile FTA as a reference for future researches. As ADB (2008) pinpoints, “when all countries specialize in their ‘comparative advantage’ products, the entire world is better off and global prosperity is maximized.” Furthermore, it notes that the principle of comparative advantage forms part of the “gains from trade” argument. It explains the inherent logic of international free trade as the “first best” policy option.<sup>4</sup> Nonetheless, ADB argues that comparative advantage needs to be complemented by some form of government policy at the national level. According to them, “Comparative advantage is also a dynamic process, suggesting trade increases efficiency and prosperity, government policy at the national level plays a key role in determining to what degree each will be successful.”

## **2.4. Contribution of the Paper**

The Philippines, along with Cambodia, Indonesia, and Thailand are expected to be affected if they do not join the TPP (Deardoff, 2013). Trade diversion will be mainly due to the fact that Japan and the US, which are both top export destinations of the excluded ASEAN countries, might opt to import from the other TPP countries instead. In fact, Petri, et al. (2011) cited that for the Philippines, the cost of exclusion from the TPP might amount to \$500 million in GDP by 2025, without considering Japan as part of the TPP deal. In contrast, should the Philippines,

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<sup>2</sup> Consortium of Euro-Asia Centre, University of Limerick and IFRI. 2006. A qualitative analysis of a potential Free Trade Agreement between the EU and ASEAN. SI2.421512. p. 12.  
[http://trade.ec.europa.eu/doclib/docs/2007/march/tradoc\\_134021.pdf](http://trade.ec.europa.eu/doclib/docs/2007/march/tradoc_134021.pdf)

<sup>3</sup> Note that Balassa RCA index compares the national export structure with that of the world and thus focuses only on export data. Still, it can generate valuable information especially if the analysis is carried out at a high level of disaggregation

<sup>4</sup> one that should lead to greater welfare for all countries

along with Japan, South Korea, Thailand, and Indonesia join the TPP, the Philippines could gain \$22.1 billion in terms of income.

While there are theories to illustrate possible effects on the Philippines once the TPP finally comes about, and while there are simulations that approximate the amounts by which the Philippines could gain or lose, none of the studies done on the matter have used an indicator approach to assess the Philippines' current trade scenario with the TPP countries. As to how exactly will the trade diversion or reorientation occur if the Philippines does not join the TPP, or in which sectors could the Philippines gain if ever it joins the TPP, the available literature does not answer these questions yet. To answer these questions, and to complement the findings of the computable general equilibrium analyses, this study will use the indicators in the Sussex framework to evaluate the implications of joining or not joining the TPP agreement. Nevertheless, it should be noted that the dynamic effects of TPP on Philippines is not the focus. Rather, it is the PH-US bilateral trade in goods in the eventuality of an FTA between the two arises in the context of the TPP.

## **CHAPTER 3**

### **Methodology**

Assessing the impact of changes in trade policy is usually carried out through the use of computable general equilibrium (CGE) models, partial equilibrium (PE) models, and econometric analysis.

An alternative approach is provided by the Sussex framework. The Sussex framework provides a template of analyzing the viability or considering potential costs or benefits of a trade agreement through a set of diagnostic indicators. These indicators are developed as tools to measure trade concepts such as comparative advantage, complementarity of economic structure, intra-industry trade intensity, etc.

The indicators, having economic theory as their foundation, can be used to indicate the trade creation or trade diversion. In interpreting the indicators, the framework resorts to using rules of thumb in evaluating the relative desirability of the formation of FTA between prospective partners. The indicators and the corresponding rules of thumb then “shed light directly and indirectly on the welfare consequences” and distributional impacts of a trade agreement. The Rules of Thumb (RoT) of the Sussex framework are the following<sup>5</sup>:

- (1) Standard trade theory states that Customs Union or, by extension, FTAs, are said to be welfare enhancing when trade creation is greater than trade diversion. Trade creation occurs when domestic production in a nation that is a member of the agreement is replaced by lower-cost imports from the other member nation. On the other hand, trade diversion occurs when lower-cost imports from outside the trade agreement are replaced by higher cost imports from the agreement member (Salvatore, 2011). The condition for welfare improvement is elaborated in the checklist of Brown and Hagedorn (1994) stating that when countries forming a trade arrangement have very low tariffs to start with, or very high ones, then the chances for trade diversion are lessened. It further supposes that when tariffs were very low, the diversion will be slight when they are dropped altogether; whereas if they were very high, there was little trade to divert since the high tariffs suppressed it;
  
- (2) The higher the percentage of trade with potential partners, the more likely the FTA is to be welfare enhancing. The idea behind this is that increasing the imports from a given country under the presence of Most Favored Nation or MFN tariffs entails that the supplier country is indeed a low-cost supplier. Hence, removing tariffs on this country’s products is then likely to be welfare enhancing (Gonzales, et al, 2012). Another interpretation of this is that, if low cost-producers of any given good belong to a trade agreement with another country then there is lesser switching cost from trading with non-member suppliers to member (Brown

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<sup>5</sup> Based on Gonzales, et al (2012) *Evaluating Bangladesh’s FTA options and challenges*. Bangladesh Foreign Trade Institute.

and Hagedorn, 1994). Aside from the concentration in goods, the proportion of trade in the partner country is also related for the second rule of thumb. Again, in Brown and Hagedorn's (1994) checklist of conditions for welfare improvement, it states that if countries already conduct a large proportion of their trade with one another before integration takes place among them then there is bound to be little trade diversion. Since there is an effective demand and capability of supply even without the FTA already, the FTA can only enhance the trading between partners (Schott, 1989);

- (3) The greater the number of partners, the more likely the agreement will be welfare enhancing. This is due to the fact if low-cost producers of any given good also belong to the arrangement then there will be a greater chance to capture the most efficient supplier among the country members, hence lessening the chance of trade diversion (Brown and Hagedorn, 1994);
- (4) Wide differences in comparative advantages between countries can lead to trade enhancing agreements provided that these differences are not being exploited. This is true since arrangements among countries with different factor proportions will tend to stimulate trade along the Heckscher-Ohlin lines. Countries will specialize and trade the commodities in which they have the right factor proportions. This is as opposed to countries with similar factor proportions, which would expect less trade creation as suggested by Heckscher-Ohlin principles (Brown and Hagedorn, 1994);
- (5) If countries have different costing structures, they can benefit from opening borders and engaging in *inter*-industry trade. But equally, if countries have similar trading structures and similar comparative advantages, they may also benefit from wider 'niche'- specialization or *intra*-industry trade. While inter-industry trade is founded on the difference in the comparative advantages of nations, intra-industry trade is based on product differentiation and economies of scale. Consequently, while trade based on comparative advantage is presumably larger when there is a greater difference in factor endowments among nations, intra-industry trade is likely to be larger among countries with similar size and factor proportions (Salvatore, 2011).
- (6) The more similar are excluded countries' trading structures to those of the proposed preferential partner, the higher the probability of trade diversion occurring. This is due to the fact that there is a higher probability of substitution of suppliers in favor of the members of the agreement. For example, in evaluating the cost of EU-India FTA on Bangladesh's trade relations with EU, Gonzales (2012) examined the similarity in the export structure of Bangladesh and India. In the common sectors, there is a possibility that EU would import from India at the expense of Bangladesh since the former is preferred by the FTA;

- (7) Traditional gains from trade come from exploiting comparative advantages but there are further ‘dynamic’ gains that can arise from increases in efficiency and productivity, which are more likely to occur with deeper integration, often via supply chains. Traditional gains come from the inter-industry trade that may happen between countries while dynamic gains root from intra-industry trade.

Table 3.1 summarizes the Sussex framework’s rules of thumb together with their corresponding trade indicators and decision points. In calculating the indicators, the **Tradesift software** is employed.

Table 3.1. RoTs and their Corresponding Indicators and Decision Points.

<b>Rule of Thumb/Criterion</b>	<b>Indicator</b>	<b>Decision points</b>
(1) FTAs are said to be welfare enhancing when trade creation is greater than trade diversion.	Magnitude of the tariff prior to the agreement. One can examine the tariff pre-FTA though identifying the broad sectors with the highest tariffs, comparing tariff across years and establishing patterns, stating the relationship of bound versus applied tariffs and looking at the number of FTA partners across the years for the Philippines.	Higher tariffs imply the presence of greater distortions and hence their removal is likely to lead to higher welfare effects.
(2) The higher the percentage of trade with potential partners, the more likely the FTA is to be welfare enhancing	For the concentration of exports across sectors, the Trade Concentration Index (TCI) is used while for the concentration of trade, the geographical distribution is analyzed. Under the concentration of trade, there are two subcategories, namely, export destination and import source. Export destination determines the top destinations of a country’s exports while import source identifies the top suppliers of a country’s imports. These indicators are examined across the years.	The higher the concentration both across sectors and across countries, the more likely the FTA is welfare enhancing. For TCI, an index near to one implies greater concentration while a value near zero implies more commodity diversification. On the other hand, for the geographical distribution, a proportion higher than the average proportion means concentrated. Also, a higher figure over the years entails

		higher concentration.
<p>(4) Wide differences in comparative advantages between countries can lead to trade enhancing agreements provided that these differences are not being exploited;</p> <p>(6) The more similar are excluded countries' trading structures to those of the proposed preferential partner, the higher the probability of trade diversion occurring.</p>	<p>The RCA can be analyzed across the prospective FTA partners and across the years. It provides a list of the comparative advantages of a country.</p>	<p>The comparative advantages can be compared relative to another partner country or to the rest of the world;</p> <p>An RCA index of greater than 1 means that the country has a standard or bilateral revealed comparative advantage in the commodity.</p> <p>The more similar the RCA of excluded countries are to those of the proposed preferential partner, the higher the probability of trade diversion occurring; and the wider the differences in RCAs between countries engage in the trade agreement, the more trade enhancing the agreement is, provided that these differences are not being exploited.</p>
<p>(5) If countries have different cost structures, they can benefit from opening borders and engaging in <i>inter</i>-industry trade. But equally, if countries have similar trading structures and similar comparative advantages, they may also benefit from wider</p>	<p>The IIT and FKI over the years of the proposed FTA partners are studied in the first part. Meanwhile, the second part of the analysis only uses the FK index between the TPP members and the country to be excluded (Philippines) in order to see the similarities in their export structure to the US and to the world.</p>	<p>Estimates the degree of integration between countries and the similarity or complementarity of the countries' exporting structures respectively.</p> <p>If the IIT index is 1, then it means that all</p>



<p>‘niche’ - specialization or <i>intra</i>-industry trade;</p> <p>(6) The more similar are excluded countries’ trading structures to those of the proposed preferential partner, the higher the probability of trade diversion occurring;</p> <p>(7) Traditional gains from trade come from exploiting comparative advantages but there are further ‘dynamic’ gains that can arise from increases in efficiency and productivity, which are more likely to occur with deeper integration, often via supply chains.</p>		<p>products are both imported and exported; if the IIT is 0, then no products are both imported and exported. A rise in the IIT index entails deeper integration between countries due to vertical specialization.</p> <p>If the FK index is 1, the share of exports out of total exports going to the destination markets is identical across the two countries concerned; and if the index is 0 then the structures are completely divergent. Hence, the more similar the trading structure of two countries, the more chance of trade diversion or trade re-orientation.</p>
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Source: Tradesift, 2013

The indexes, which pertain to the aforementioned rules of thumbs, are the TCI, RCA, IIT, and FK indexes. The TCI which measures the degree of concentration of trade indicates the degree to which a given country’s exports are particularly concentrated by product (Tradesift, 2013). It can be calculated by summing the squares of the share of each export of country i to j ( $x_{ij}$ ) to the total exports of country i to j ( $X_{ij}$ ):

$$TCI \text{ by Product}_{ij} = \sum_k \left( \frac{x_{ij}}{X_{ij}} \right)^2$$

On the other hand, the RCA indicates the list of sectors or goods the home country has comparative advantage in. There can be two perspectives, by which one can determine the RCA. The first is the revealed comparative advantage of the country relative to the rest of the world

while the other is the relative comparative advantage of the country relative to another country. Through this, one can observe if there are similarities or differences in the revealed comparative advantages of a country versus another country or versus the rest of the world. Hence, it can shed light on the export structure of the two subjects (Tradesift, 2013). However, even though RCA can be easily computed to capture market competitiveness, the indicator still has limitations. For one, it relies on static information (data in the past) It also does not trace the source of the comparative advantage of a country, e.g., due to presence of policy instruments such as subsidies, etc. Regardless of such restrictions, the use of RCA analysis has been established on international economics literature. Majority of the studies use the analysis to analyze patterns on exports. The formula for RCA is

$$RCA_{iw}^k = \left( \frac{x_{iw}^k}{X_{iw}} \right) / \left( \frac{x_{ww}^k}{X_{ww}} \right)$$

where  $x_{iw}^k$  represents exports of sector  $k$  by country  $i$  to the world, and  $X_{iw}$  denotes total exports from country  $i$  to the World, and where capital letter subscripts represent total flows of all goods. The RCA index ranges between 0 and infinity and where the upper bound for any given calculation is given by  $x_{ww}^k/X_{ww}$ . An RCA greater than 1 implies that the given country has a comparative advantage in that sector in the sense that compared with the world as a whole, this sector has a large share of the country's exports.

IIT and FK indexes meanwhile, gauge the degree of integration between countries and also the similarity or complementarity of the countries' exporting structures respectively. IIT specifically suggests if there is any evidence of possible vertical fragmentation and supply chain linkages (Tradesift, 2013). The IIT can measure the "overlap" of imports and exports at the aggregate and at the disaggregated level. The standard formula for IIT in the aggregate level is the Grubel and Lloyd (G-L) index with a formula of

$$GL_{ij}^k = 1 - \left( \frac{|x_{ij}^k - m_{ij}^k|}{x_{ij}^k + m_{ij}^k} \right)$$

where  $x_{ij}^k$  and  $m_{ij}^k$  denote exports and imports from/by country  $i$  to/from country  $j$  of commodity  $k$ . On the other hand, the G-L index across all goods is given by

$$GL_{ij} = \sum_k GL_{ij}^k \left( \frac{x_{ij}^k + m_{ij}^k}{X_{ij} + M_{ij}} \right) = 1 - \frac{\sum_k |x_{ij}^k - m_{ij}^k|}{X_{ij} + M_{ij}}$$

with the same variable notations as the previous one.

Compared to IIT, FK can only estimate the similarity of imports and exports at the aggregate level. It has two types. The FK1 is used if the focus is two countries having the same destination while FK2 is used if the target is having common source. In this paper, FK1 is used

since the objective is to evaluate the similarity of US and the Philippines in terms of exporting to the world and the similarity of Philippines and the TPP members in exporting goods to US. FK by a common destination is calculated using the formula:

$$FK_{i_1 i_2 j} = \sum_k \min \left[ \left( \frac{x_{i_1 j}^k}{X_{i_1 j}} \right), \left( \frac{x_{i_2 j}^k}{X_{i_2 j}} \right) \right]$$

where  $i_1$  and  $i_2$  to the two source countries and  $j$  to the destination country;  $x^k$  refers to the trade flow in product  $k$ ;  $X$  to the total trade flow, so  $x_{i_1 j}^k/X_{i_1 j}$  is the share of product  $k$  in country  $i$ 's total exports to the destination partner ( $j$ ).  $x_{i_2 j}^k/X_{i_2 j}$  is the share of product  $k$  in the comparator country's ( $i_2$ ) total exports (Tradesift, 2013).

With the Sussex framework as springboard, the structure of this paper's analysis is depicted in the following figure. Firstly, the implications of the Philippines in joining the TPP would be modeled as a bilateral FTA between the Philippines and the US. In principle, the implications of the Philippines joining the TPP would be a series of bilateral FTAs of the Philippines with the TPP partners. However, emphasis would be given to the Philippine-US FTA in the analysis. The analysis will use the following indicators: (a) magnitude of tariff prior to the agreement; (b) TCI; (c) RCA; (d) IIT; and (e) FKI in accordance to the stipulated rules of thumb. Moreover, a list of possible commodities that can be prioritized in the PH-US FTA will also be generated.

On the other hand, to derive the implications for the Philippines of not joining the TPP, the TPP is modeled as a series of bilateral FTAs between the US and the TPP partner, that is, US-Australia bilateral FTA, US Brunei bilateral FTA, US-Canada bilateral FTA, etc. An assessment of the effects of the bilateral FTAs on the Philippines would then be conducted, using the rules of thumb in the Sussex Framework.

Specifically, the GSP and MFN tariffs of US on the exports of TPP members and the Philippines will be analyzed in order to check if preference erosion will occur. There are three possible scenarios for this, namely: (a) no negative effect on excluded country; (b) trade re-orientation effect; and (c) trade diversion effect. The first outcome is expected to materialize if and only if prior to TPP, the Philippines and the TPP members exporting to US all face zero tariffs. The second outcome is possible, on the other hand, if Philippines has a zero tariff access to US market and same access will be granted to the proposed preferential partners (current TPP members) due to agreement. Finally, trade diversion can only occur if Philippines and the TPP members are charged with the same positive US tariff prior to agreement.

Aside from tariffs, FK and the relative export competitiveness pressure index (RECPI) between the Philippines and the TPP members excluding US will also be calculated. FKI estimates the similarity in the trade structures of these countries, which implies the degree of competition to be faced by the Philippines if it were to be excluded from TPP. RECPI meanwhile, gives an idea on the average magnitude of export competitiveness pressure and direct competition that will be exerted against Philippine products by the identified TPP competitors. RECPI has a formula of

$$RECPI = \frac{\sum_k x_{i_1,j}^k x_{i_2,j}^k}{\sum_k (x_{i_1,j}^k)^2}$$

where  $k$  refers to the product,  $i_1$  to the reporting country,  $i_2$  to the competitor country, and the  $s$  and  $x$  data refer to a given export destination, country  $j$ . The  $x_{ij}^k$  is the value of country  $i$ 's exports to country  $j$  of good  $k$ , and  $s_{i1}^k$  gives the share of good  $k$  in country  $i$ 's exports to country  $j$ . The RECPI is a summary measure which aggregates information from across a range of sectors, subsectors or products. Hence, the index can be provided either for all trade, or for particular sectors—in all cases on the basis of more detailed subsectoral or product level detail (Tradesift, 2013). Finally, specific list of commodities that will most likely face competition will also be produced. Their importance to the Philippine export basket to the US will also be emphasized.

While the entire Sussex framework consists of a number of indicators, some studies utilize only indicators that prove to be relevant. In addition, chosen indicators do not necessarily have a specific order. On the contrary, they only support and complement each other by describing different perspectives from which the effects of a trade agreement may be valued. Nonetheless, one limitation of the Sussex framework is the challenge of judging the weight of welfare gain or loss that an indicator suggests. Indicator only signals; but it does not exactly quantify. Also, as in any other model used in analyzing trade, possibilities in the future are only approximated using data from the past; actual outcomes could differ.

Figure 3.1 highlights the conceptual framework of the paper.

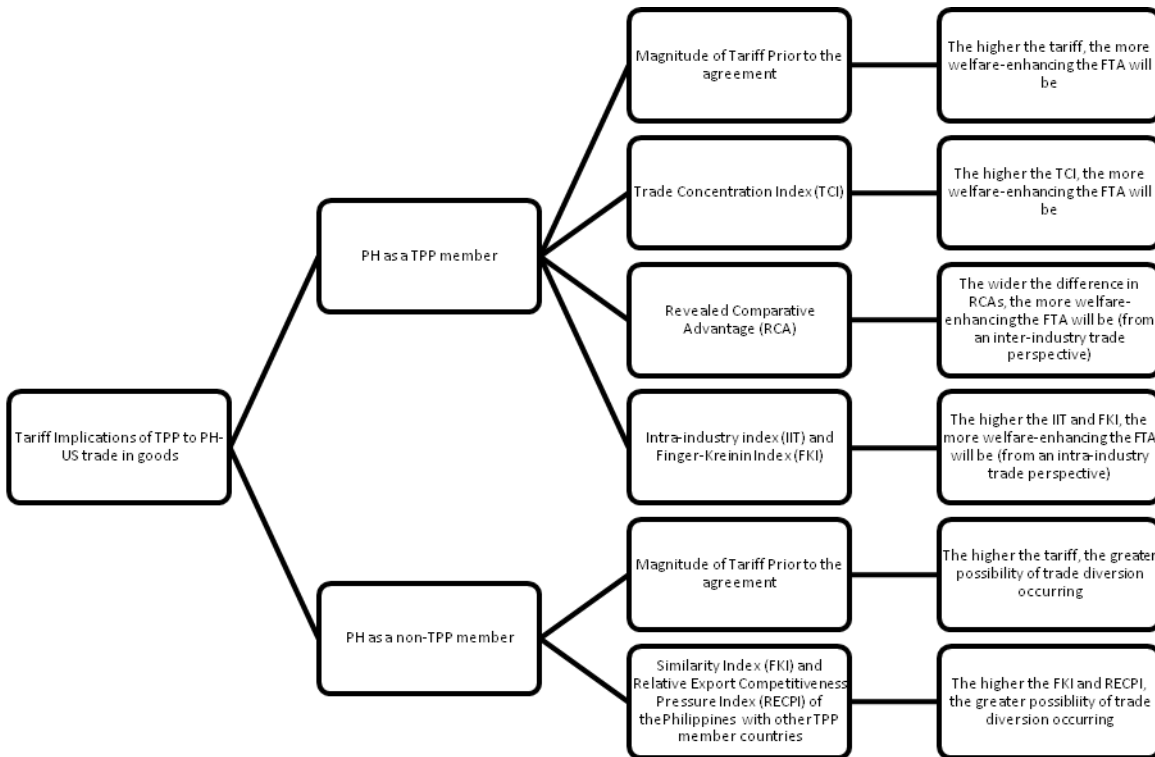


Figure 3.1. Conceptual framework.

*Adapted Sussex framework for PH-US trade in goods in the context of the TPP.*

## CHAPTER 4

### Results and Analysis

This chapter is divided into three parts. The first part presents the general trade structure of the Philippines, namely, its tariff barriers, imports and export composition, and geographical distribution of trade. The purpose of the first part is to give a background of the trade policy and the trade patterns of the Philippines. The rest of the chapter discusses the possible economic impact of having a Philippine-US Free Trade Agreement. The second part draws the pros and cons of having an FTA while the third part analyzes the consequences of maintaining the status quo.

#### 4.1 General Tariff and Trade Structure of the Philippines

##### 4.1.1 Philippine Tariff System

The evolution of average tariffs in the Philippines from 1998 until 2010 is shown in Figure 4.1. The 2010 tariff data were used because those were the latest available data found in the trade database of the World Bank. The average applied tariffs have been declining since the early 1990's due to the series of Tariff Reform Programs undertaken by the Philippine government. As shown in the graph, overall applied tariffs were reduced from 10 percent in 1998 to only 5 percent in 2010. Note that these are non-preferential tariffs.

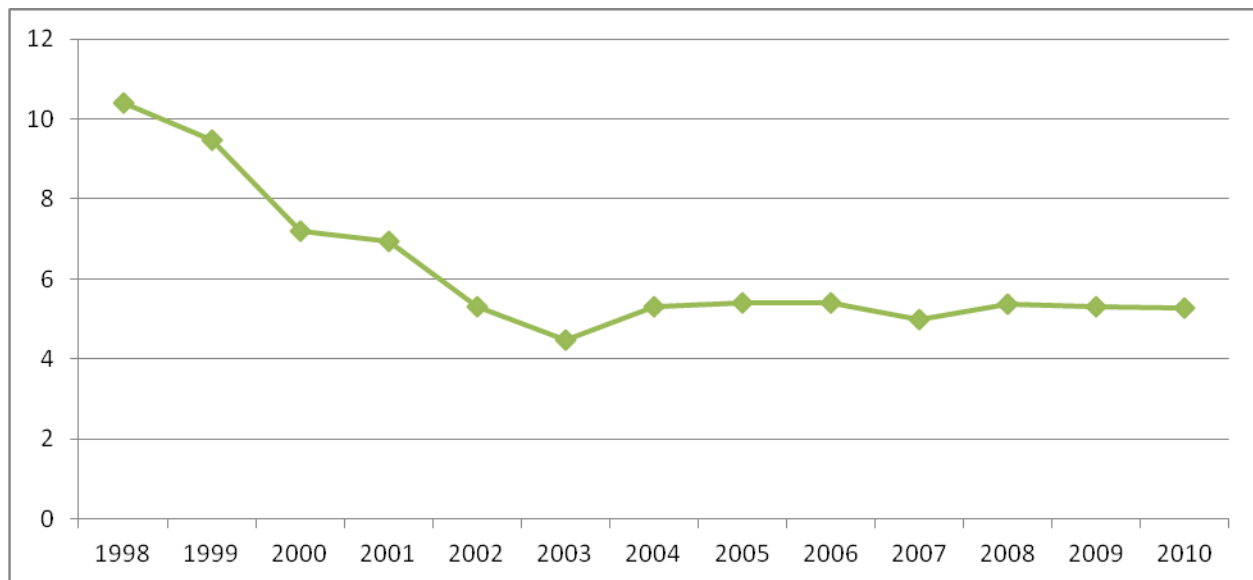


Figure 4.1. Philippine simple average MFN applied tariffs, 1998 to 2010.

Source: World Integrated Trade Solution (WITS), World Bank.

The size of the applied tariff shows the preference margin that will be awarded to FTA partners should agreements be successfully concluded. The simple average tariff levied by the Philippines on all products in 2010 is already at par with the world average as shown in Figure 4.2. However, the same may not be said for the effective applied tariffs for each product group.

The tariffs imposed by the Philippines on some commodity groups are higher than the world average applied tariffs for the same commodity groups. The difference is seen, for example, in the case of plastic or rubber products, on which the effectively applied tariff imposed by the Philippines is 7.5 percent while the world average applied tariff is 5 percent; also for textile and clothing, on which the Philippine tariff is 10 percent while the world average is 8 percent; and for wood products, the Philippine tariff is 5.5 percent while for the world, 4 percent. Also, in 2010, the difference was even more pronounced in the cases of hides and skins, as well as transportation products for which the Philippine applied tariff was 9 percent compared to the world average it was only 5 percent. The distribution of applied tariff across sectors is indicative of the degree of their political sensitivity. This may not be the same picture anymore for more recent years, but based on the latest data in the database of the World Bank, the same sectors that have always been greatly protected by the Philippines may still have higher tariffs as of 2012.

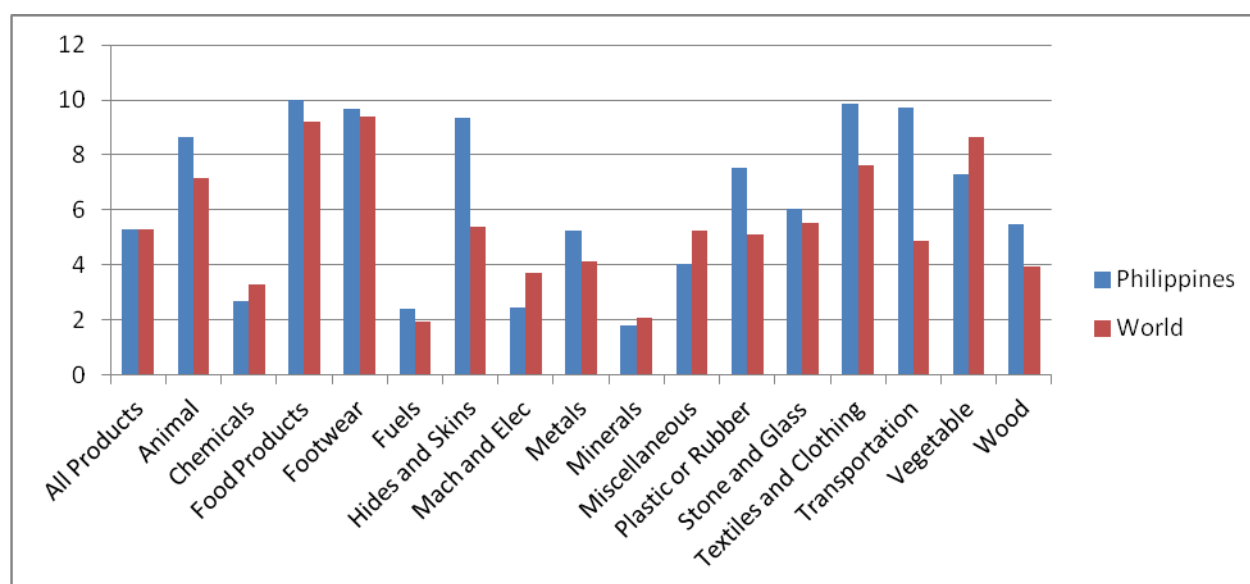


Figure 4.2. Simple average applied tariffs of Philippines and World, 2010.  
Source: World Integrated Trade Solution (WITS), World Bank.

Table 4.1 shows the Philippine applied tariffs for various commodity groups in the year 2000 and 2010. The sectors receiving targeted protection from the government were identified by looking at the differences of tariffs applied across sectors. It is important to note that for most of the commodity groups, the applied tariff declined except for live animals, footwear, hides and skins, machinery and equipment, and textiles and clothing. In fact, there was a huge increase in the applied tariff for hides and skins from 6 percent in 2000 to 10 percent in 2010. The said sector received the third highest applied tariff, next only to footwear with 13% and transportation with 11 percent. Despite the relatively high tariffs for the said sectors, the small shares of imports that these sectors represent suggest that the scope for either trade creation or trade diversion is likely to be small for the economy as a whole. The sectors with the highest share in imports, which are the groups of machinery and electrical equipment, fuels, and chemicals have the lowest applied tariff rates at 1.8 percent, 2.8 percent and 2.5 percent, respectively.

Table 4.1. Philippine weighted average applied tariffs (%), 2000 and 2010.

	2000		2010	
	Import Share	Weighted Average	Import Share	Weighted Average
Animal	1.9	7.69	2.24	9.51
Chemicals	6.03	3.74	7.05	2.5
Food Products	2.72	11.29	4.13	6.61
Footwear	0.2	11.51	0.17	13.11
Fuels	11.07	3.11	17.02	2.84
Hides and Skins	0.2	6.08	0.17	10.23
Machinery and Electrical Equipment	53.05	1.31	40.65	1.79
Metals	4.8	6.34	4.52	4.71
Minerals	1.51	3.26	2.61	2.78
Miscellaneous	2.41	4.95	2.08	4.19
Plastic or Rubber	3.21	8.37	3.08	7.84
Stone and Glass	0.72	7.61	1.42	5.34
Textiles and Clothing	3.99	9.08	1.52	9.79
Transportation	3.36	12.67	6.33	10.84
Vegetable	2.59	15.5	5.21	9.33
Wood	2.24	6.63	1.8	4.15

Source: World Integrated Trade Solution (WITS), World Bank.

#### 4.1.2 Geographical Distribution of Trade

Among the TPP negotiating parties, only Japan, the USA and Singapore (Table 4.2) are among the Philippines' top trading partners in 2012. This is despite the fact that the Philippines already has an existing free trade agreement with other ASEAN countries, as well as free trade agreements of the entire ASEAN with other countries in the Pacific such as Australia and New Zealand.

It is understandable for Japan to top the list of export markets for Philippine products because of the Philippines-Japan Economic Partnership Agreement (PJEPA). This was followed by two other large economies—the USA and China. Among ASEAN neighbors, the largest export market is Singapore which ranked 4<sup>th</sup> in the top export markets; the only other ASEAN country that made it to the top 10 markets of Philippine export products was Thailand which ranked 7<sup>th</sup>. The Republic of South Korea, another Asian country that is being considered to be part of the TPP, also landed 6<sup>th</sup> place among the top export markets. The only countries in the list of top export markets that did not make it to the list of top import suppliers were Hong Kong and the Netherlands. In 2012, the only European countries that were among the Philippines' top export partners were Germany and the Netherlands.



Table 4.2. Top 10 markets of Philippine merchandise exports (2012), based on FOB value.

Rank	Country	Share (%)
1	Japan	19
2	United States Of America	14
3	China, People's Rep. Of	12
4	Singapore	9
5	Hong Kong SAR	9
6	Korea, Rep. Of (South)	6
7	Thailand	5
8	Germany	4
9	Taiwan (Rep. Of China)	4
10	Netherlands	3
Others		16

Source: Philippine Statistics Authority.

Whereas, Japan topped the list of markets for Philippine export products, the USA topped the list of suppliers of Philippine imports followed by China and Japan at second and third places. The only countries in the list of top import suppliers that did not make it to the list of top export markets were Saudi Arabia and Indonesia, another ASEAN neighbor. Germany was the only EU member-country that was among the Philippines' top import suppliers (Table 4.3).

Table 4.3. Top 10 suppliers of Philippine merchandise imports (2012), based on FOB value.

Rank	Country	Share (%)
1	United States Of America	11
2	China, People's Rep. Of	11
3	Japan	10
4	Taiwan (Rep. Of China)	8
5	Korea, Rep. Of (South)	7
6	Singapore	7
7	Thailand	6
8	Saudi Arabia	6
9	Indonesia	4
10	Germany	2
Others		27

Source: Philippine Statistics Authority.

Among the countries that are already part of the TPP and those that are still negotiating membership to the agreement, only Brunei, Malaysia, Singapore, Vietnam, Australia, New Zealand, and Japan has an existing comprehensive partnership agreement with the Philippines. The Philippines has a free trade agreement with the first four mentioned countries through the AFTA. Through its membership in the ASEAN, the Philippines also gained free trade agreements with Australia and New Zealand; and the only bilateral trade agreement that the Philippines currently has is with Japan through the PJEPA.

As for the USA, although talks for a bilateral trade between the Philippines and the US are still underway, Philippine exports currently benefit from the Generalized System of Preferences (GSP) program designed by the US government to promote trade with developing countries. In short, among the countries negotiating membership to the TPP, the only ones with which the Philippines do not still have any trade agreements with are Canada, Chile, Mexico, and Peru.

The figure below shows the portion of the exports in 2012 that goes to the Philippines' current FTA partners, vis-à-vis the non-FTA partners. The FTA partners represent more than half of the Philippines' export markets at 56.6 percent. Japan (19%), the collective ASEAN (18.9%), China (11.8%) and South Korea (5.5%) had the biggest shares, while Australia (0.7%), India (0.6%), and New Zealand (0.1%) comprised smaller portions. Again, the Philippines gained FTAs with these countries through its membership in the ASEAN except for Japan. On the other hand, among the non-FTA partners, the larger shares of Philippine exports went to the US (14.2%), Hong Kong (9.2%), Taiwan (3.7%), Canada (1%), and Switzerland (0.7%).

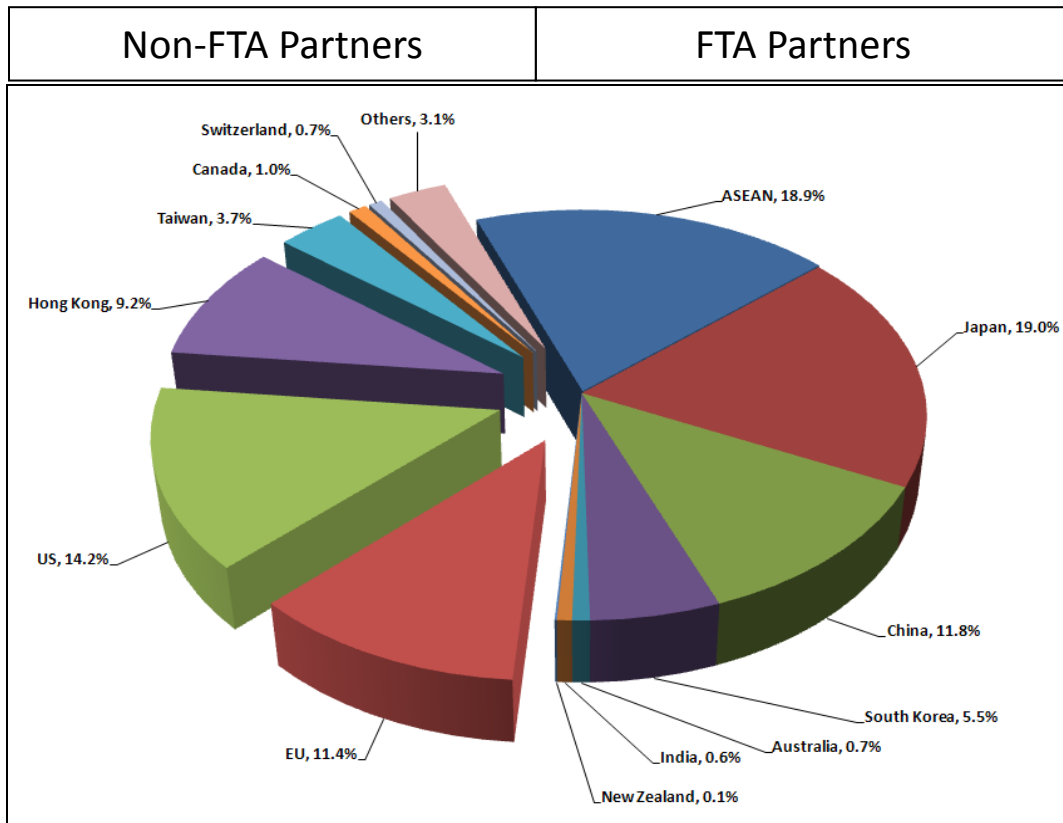


Figure 4.3. Philippine export markets, 2012.  
Source: Philippine Statistical Authority.

On the other hand, the tables below describe the share of the prospect TPP partners in total trade. The total imports and exports of all the TPP partners is highlighted in contrast with the breakdown of the share of each TPP country in Philippine imports and exports. The total share of TPP partners is also compared with the share of the rest of the world.

Table 4.4 shows the trade between the Philippines and the prospect TPP partners for the year 2000. At that time, the TPP countries comprise more than half of both Philippine imports and exports at 52 percent and 59 percent, respectively. The TPP countries that contributed largely were the US (18% of imports and 30% of exports), Japan (19% of imports and 15% of exports), Singapore (7% of imports and 8% of exports), Malaysia (4% of imports and 4% of exports), and Canada (1% of imports and exports).

Table 4.4. Trade between the Philippines and Prospect TPP Partners, 2000.

Partner	Imports Value	Imports Share	Exports Value	Exports Share	Trade Balance
USA	6,820,308.25	18%	11,405,672.68	30%	4,585,364.43
Viet Nam	175,235.99	0%	74,573.81	0%	(100,662.18)
Singapore	2,514,125.65	7%	3,124,225.80	8%	610,100.15
Peru	36,714.94	0%	796.22	0%	(35,918.73)
New Zealand	183,883.65	0%	18,593.86	0%	(165,289.80)
Mexico	43,373.08	0%	284,582.21	1%	241,209.13
Malaysia	1,405,173.67	4%	1,377,360.75	4%	(27,812.93)
Japan	6,960,839.74	19%	5,608,677.58	15%	(1,352,162.16)
Chile	82,906.43	0%	16,394.80	0%	(66,511.63)
Canada	250,747.59	1%	343,309.91	1%	92,562.33
Brunei Darussalam	172.75	0%	3,972.90	0%	3,800.15
Australia	884,294.10	2%	309,487.11	1%	(574,806.99)
<b>TPP Total</b>	<b>19,357,775.86</b>	<b>52%</b>	<b>22,567,647.63</b>	<b>59%</b>	<b>3,209,871.77</b>
<b>Rest of the World</b>	<b>17,649,625.91</b>	<b>48%</b>	<b>15,510,602.16</b>	<b>41%</b>	<b>(2,139,023.75)</b>
<b>World</b>	<b>37,007,401.77</b>	<b>100%</b>	<b>38,078,249.79</b>	<b>100%</b>	<b>1,070,848.03</b>

Source: UN Comtrade.

However, the picture changed come 2012 as the TPP countries collectively lost import and export shares while the rest of the world (ROW) gained a larger share. As shown in Table 4.5, while the total imports and exports of the TPP countries represented more than half of Philippine trade in 2000, this fell to only 39 percent share of imports and 48 percent share of exports in 2012. On the other hand, the rest of the world or the non-TPP partners, which represented only 48 percent of imports and 41 percent of exports in 2000, increased their imports and exports share to 61 percent and 52 percent in 2012, respectively. Looking at the breakdown of the shares of the TPP countries, it could be seen that the share of the US in both imports and exports fell drastically to only 12 percent and 14 percent in 2012, respectively. This dragged down the TPP total in spite of the gain in shares by the other countries like Vietnam (2% of imports and 4% of exports from near 0% imports and exports in 2000) and Japan (19% of exports from 15% of exports in 2000).

Table 4.5. Trade between the Philippines and prospect TPP partners, 2012.

Partner	Imports Value	Imports Share	Exports Value	Exports Share	Trade Balance
USA	7,590,063.34	12%	7,406,422.79	14%	(183,640.55)
Viet Nam	1,021,136.46	2%	593,443.27	1%	(427,693.19)
Singapore	4,653,794.97	7%	4,863,929.04	9%	210,134.06
Peru	31,684.57	0%	17,275.05	0%	(14,409.52)
New Zealand	476,916.44	1%	49,088.06	0%	(427,828.38)
Mexico	75,967.21	0%	225,163.27	0%	149,196.06
Malaysia	2,619,856.40	4%	1,018,099.39	2%	(1,601,757.02)
Japan	6,960,940.11	11%	9,881,269.13	19%	2,920,329.02
Chile	27,977.58	0%	29,548.60	0%	1,571.02
Canada	332,453.88	1%	508,184.92	1%	175,731.04
Brunei Darussalam	58,582.30	0%	7,242.57	0%	(51,339.73)
Australia	1,450,953.55	2%	387,251.90	1%	(1,063,701.65)
<b>TPP Total</b>	<b>25,300,326.80</b>	<b>39%</b>	<b>24,986,917.97</b>	<b>48%</b>	<b>(313,408.83)</b>
<b>Rest of the World</b>	<b>40,049,453.72</b>	<b>61%</b>	<b>27,008,306.02</b>	<b>52%</b>	<b>(13,041,147.70)</b>
<b>World</b>	<b>65,349,780.52</b>	<b>100%</b>	<b>51,995,223.99</b>	<b>100%</b>	<b>(13,354,556.53)</b>

Source: UN Comtrade .

The decline in the share of TPP countries in total Philippine trade provides motivation to study the possible implications of joining the said agreement. Nevertheless, a possible bilateral trade agreement between the Philippines and the US is of particular interest in this study, because the US plays an important role as a supplier and market for Philippine products. As shown in the tables earlier, the US is the most important supplier of the Philippines with 11.5 percent share of imports; it is also the second largest market for Philippine products with 14.2 percent share of exports. On the other hand, among the other countries negotiating the TPP, the US already has existing trade agreements with Canada and Mexico through the North American Free Trade Agreement (NAFTA), with Peru through the Andean FTA, with Chile, Singapore, Brunei, and New Zealand through the TPP.

#### 4.2 Philippine – US bilateral trade in the context of the PH-US FTA

While the US is the Philippines' largest import supplier and second largest export market in 2012, the Philippines was the 38<sup>th</sup> largest import supplier for the US, and the 35<sup>th</sup> largest export market for US goods in 2012 (Table 4.6). This was also a decline from the Philippines' rank as the 19<sup>th</sup> largest import supplier for the US and the 18<sup>th</sup> largest export market for US goods in 2000. These are also evident in the small reduction in imports share from 1.15 percent in 2000 to only 0.42 percent in 2012 and in exports share from 1.13 percent in 2000 to only 0.52 percent in 2012. Clearly, the US is relatively more important to the Philippines as a trade partner than vice versa.

Table 4.6. US imports from and exports to the Philippines in 2000, 2012.

Year	Imports Value (million USD)	Imports Share	Exports Value (million USD)	Exports Share	Trade Balance
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2000	14,453	1.15%	8,790	1.13%	(-5,663)
2012	9,909	0.42%	8,059	0.52%	(-1,850)

Source: COMTRADE HS 1996, calculated using Tradesift.

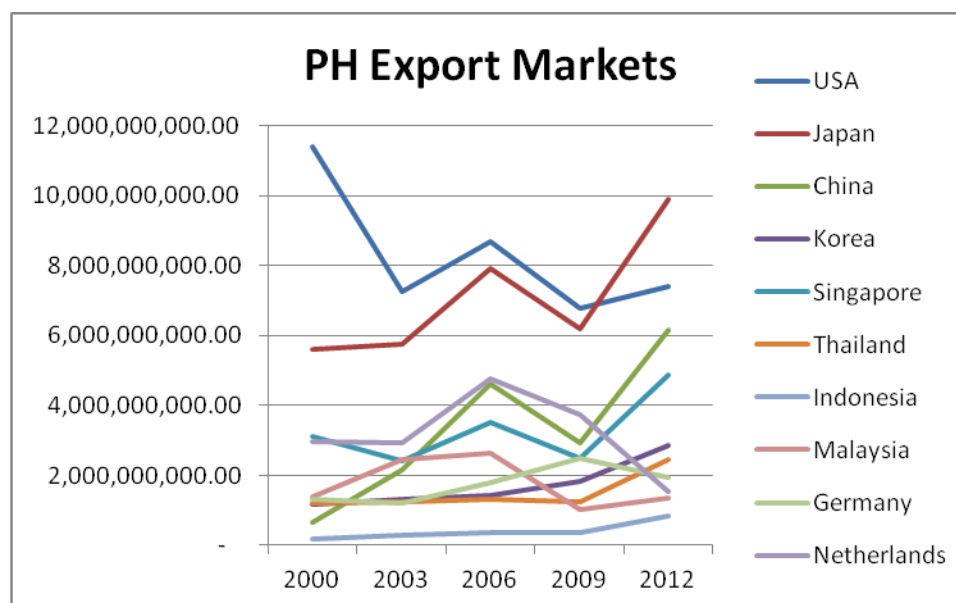
Table 4.7 shows the value and shares of imports and exports as well as the evolution in the trade balance between the Philippines and the US. Despite the role played by the US in Philippine trade, its share in total imports and total exports declined from 2000 to 2012. Whereas imports from the US represented 18.4 percent in terms of imports share in 2000, this value declined to only 11.6 percent in 2012; also, while exports to the US represented 30 percent of total exports in 2000, the share of US in total exports for 2012 was only 14.2 percent.

Table 4.7. Philippines imports from and exports to US in 2000, 2012.

Year	Imports Value (million USD)	Imports Share	Exports Value (million USD)	Exports Share	Trade Balance
2000	6,820	18.4%	11,406	30.0%	4,585
2012	7,590	11.6%	7,406	14.2%	(184)

Source: COMTRADE HS 1996, calculated using Tradesift.

What could account for the smaller share of the US as a market for Philippine exports and as a source of Philippine imports? Figure 4.4 shows that East Asian countries like Japan, China, and Korea as well as ASEAN neighbours like Singapore have gained shares in Philippine exports and imports since 2000 to 2012. In fact, after the global financial crisis, Japan finally overtook the US as the top Philippine export market. One reason for this is the expansion of the East Asian production network which may have intensified trade between countries within the region before a final good reaches other markets like the US. It may even be the case that American-owned companies have flocked these East and South East Asian economies, where goods from the Philippines are further processed.



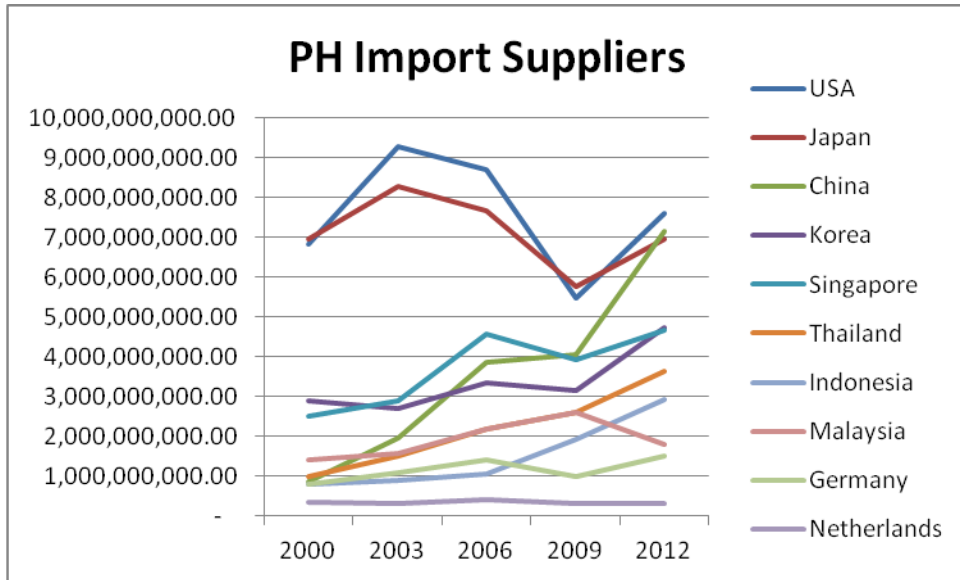


Figure 4.4. Philippine export markets and import suppliers, 2000 to 2012.  
Source: UN Comtrade.

The same picture is seen in the destinations of electrical and electronic equipment, the top products exported by the Philippines. Japan, Hong Kong, Singapore, and China have been rising as the top destinations of the said product, overtaking the US, as seen in the figure below.

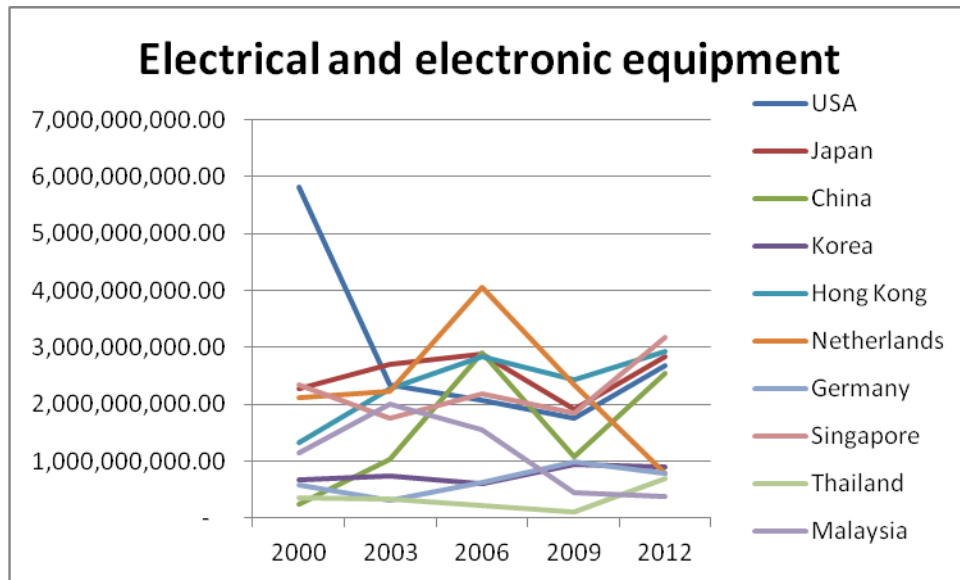


Figure 4.5. Export destinations of electrical and electronic equipment from the Philippines, 2000 to 2012.  
Source: UN Comtrade.

The declining share of the US as a Philippine trade partner coupled by the increasing share of the East Asian economies in Philippine trade may be due to the growing East Asian

production network. As shown in the graph below, Philippine exports of intermediate goods to East Asia has been growing until 2007 while exports of intermediate goods to the US has been declining until 2009. Even after 2009, the rebound in exports of intermediate goods to the US was not as sharp as the rebound in East Asia. This is despite another plunge in exports of intermediate goods to East Asia in 2011; after which, recovery has been stable.

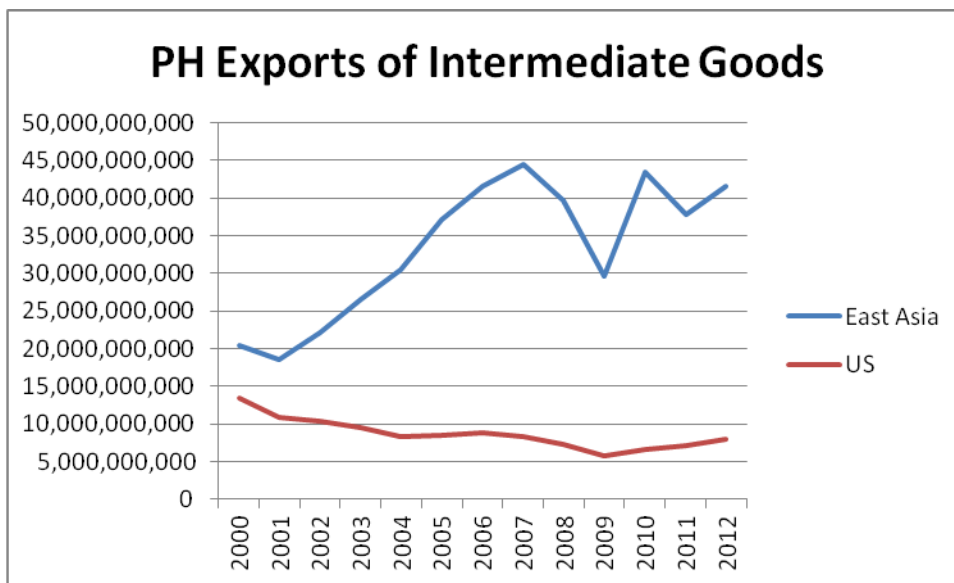


Figure 4.6. Philippine exports of intermediate goods to US and East Asia.

Source: Research Institute of Economy, Trade and Industry, IAA.

The said network could also be serving as an indirect link between the Philippines and American consumers of final goods or American-owned manufacturers that further process intermediate goods. If this will be the case, then the declining share of the US in Philippine trade should not necessarily be seen in a bad light; this also poses the question on what other benefits can the Philippines reap from signing an FTA with the US.

#### *Comparative tariff distribution of the Philippines and the US*

In the event of an FTA between two countries, the difference in their tariff distribution suggests which party will adjust more. In this light, examining the comparative distribution of the Philippines and the US is deemed important. Figure 4.7 presents the Philippine MFN tariff distribution on imports from US in 2013. Almost half of the country’s imports from the US are in the low (1% to 3%) tariff bracket while more than a quarter is already duty free. On the other hand, US MFN Tariff distribution on imports from the Philippines in 2013 (Figure 4.8) shows that half of US imports from the Philippines have zero duty access and 23 percent are in the 1 percent to 3 percent tariff bracket. While both countries levy low tariffs on majority of their imports from each other, Philippines tariff on US exports is relatively higher than US tariff on Philippine goods. With this being said, Philippines will have to adjust more in terms of lowering its tariffs if there will be an FTA with the US. Still, a PH-US FTA from the Philippine’s interests is beneficial albeit limited.

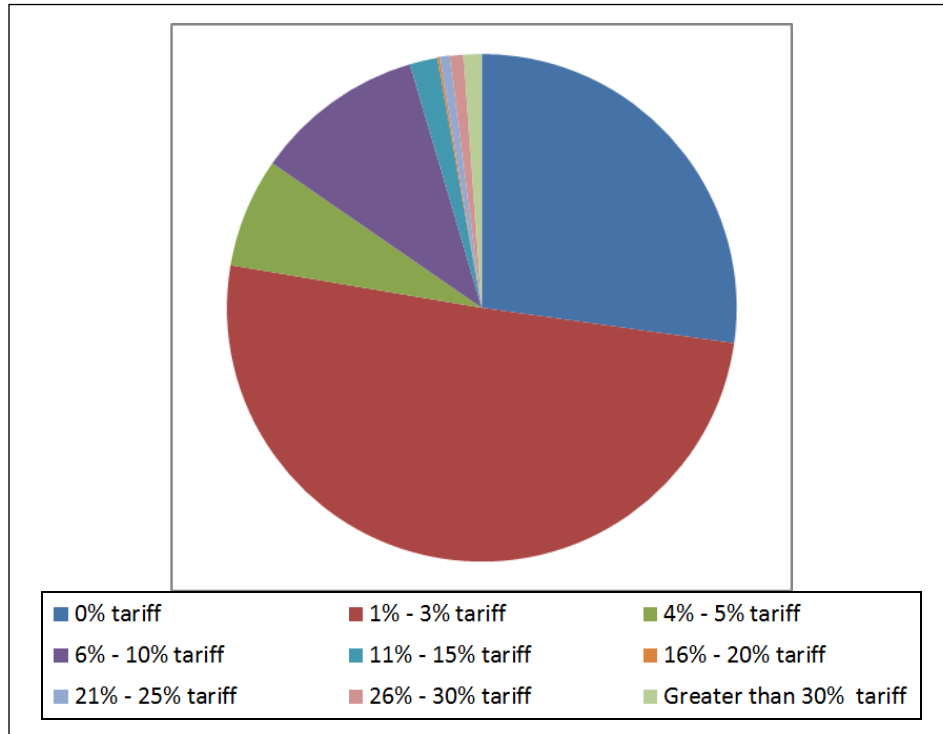


Figure 4.7. Philippine MFN tariff bracket on imports from United States, 2013.  
Source: World Trade Organization.

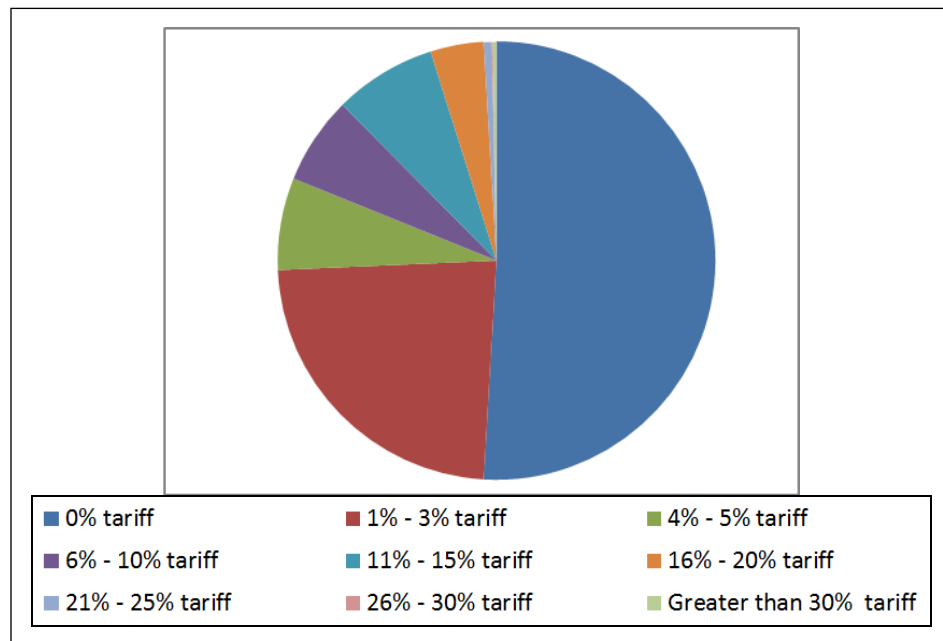


Figure 4.8. United States MFN tariff bracket on imports from the Philippines, 2013.  
Source: World Trade Organization.



#### 4.2.1. RoT 1: Magnitude of tariff prior to the agreement and the possibility of trade creation

The first rule of thumb stipulates that higher tariffs are likely to lead to higher welfare effects. A comparison between the average applied tariffs and the product groups with the greatest share in imports of the Philippines from the world and the US are shown in Table 4.8. In 2010, the products that the Philippines imported most from the world were machinery and electrical equipment with 40.65 percent share and fuels with 17.02 percent share; on the other hand, the top product that the Philippines imported from the US also came from the group of machinery and electrical equipment at 64.28 percent while a far second were the food products at 7.02 percent. The products that received the highest tariff rates were the same for both the imports from the world and the US—food products and live animals as well as footwear and textiles and clothing. This gives us a glimpse of the sectors that receive the most protection from the Philippine government. In the case of imports from the US, transportation products also receive relatively high tariff.

Table 4.8. Philippine tariffs and import shares from the world and US 2010.

Product Group	World		US	
	Product Share (%)	Average Applied Tariff (%)	Product Share (%)	Average Applied Tariff (%)
All Products	100	5.29	100	5.83
Animal	2.24	8.66	3.87	10.08
Chemicals	7.05	2.67	4.22	3.04
Food Products	4.13	10.01	7.42	12.08
Footwear	0.17	9.68	0.02	11.3
Fuels	17.02	2.39	0.12	2.37
Hides and Skins	0.17	9.35	0.09	9.36
Machinery and Electrical Equipment	40.65	2.44	64.28	2.88
Metals	4.52	5.23	0.71	5.58
Minerals	2.61	1.79	0.09	2.21
Miscellaneous	2.08	4.02	3.28	4.91
Plastic or Rubber	3.08	7.53	1.39	7.86
Stone and Glass	1.42	6.02	0.19	6.49
Textiles and Clothing	1.52	9.85	0.8	11.16
Transportation	6.33	9.71	4.42	10.78
Vegetable	5.21	7.27	6.25	8.8
Wood	1.8	5.48	2.84	5.48

Source: World Integrated Trade Solution (WITS), World Bank.

Table 4.9 on the other hand, shows the imports of US from the world and from the Philippines in 2012. It gives the share of each commodity in the US import basket as well as the simple average tariff. As inferred from the figures, the products that the US imported most from the world in 2012 also came from the groups of machinery and electrical equipment at 25.97 percent share of imports and fuels at 18.57 percent share of imports. In contrast, 52.8 percent of US imports from the Philippines were machinery and electrical equipment, followed by textiles and clothing at 12.44 percent.

Interestingly, textile and clothing may have had the second largest share in Philippine exports to the US but the tariff applied by the US to this product group was at around 9.26 percent, among the highest applied tariffs imposed by the US on products coming from the Philippines. Aside from textile and clothing, other imports from the world and from the Philippines that receive relatively high tariffs from the US are footwear and food products.

Table 4.9. US tariffs and import shares from the world and Philippines 2010.

Product Group	World		Philippines	
	Product Share (%)	Average Applied Tariff (%)	Product Share (%)	Average Applied Tariff (%)
All Products	100	2.86	100	3.17
Animal	1.09	1.2	1.4	0.81
Chemicals	8.14	1.93	1.15	0.35
Food Products	2.33	6.05	5.95	13.45
Footwear	1.31	6.01	0.12	4.78
Fuels	18.45	1.24	0	0
Hides and Skins	0.58	3.58	1	4.59
Machinery and Electrical equipment	26.35	0.92	54.32	0.14
Metals	5.01	1.29	1.14	0.2
Minerals	0.32	0.11	0.01	0
Miscellaneous	10.49	1.18	10.47	0.25
Plastic or Rubber	3.05	2.29	1.38	0.37
Stone and Glass	3.47	2.39	0.93	1
Textiles and Clothing	5.08	7.54	13.4	9.38
Transportation	10.59	1.17	0.38	0.28
Vegetable	1.81	1.34	7.58	0.83
Wood	1.93	0.46	0.77	0.13

Source: World Integrated Trade Solution (WITS), World Bank.

The relatively high US tariff on imported textile and clothing products from the world and from the Philippines may be due to the exclusion of the said product group from the GSP program designed by the US. Although the GSP aims to encourage trade, some product groups are deemed not eligible for the elimination of tariffs. Based on the 2012 Annual Review of the

GSP, it was stated that most textile and clothing products are among those excluded from GSP benefits. Also in the said list of excluded products are some agricultural products that may be in excess of assigned quotas (United States Trade Representative, n.d.).

The Philippines still gained a lot from being a beneficiary-country under the GSP program of the US. In fact, 13 percent of total US imports from the Philippines were under the GSP program, resulting into savings from tariffs of \$48.6 million<sup>6</sup>. Most of the top Philippine exports to the US were among the products receiving preferential treatment under the GSP program. Nonetheless, considering that the rule of thumb for the first indicator states that: *The higher the tariff, the more welfare-enhancing the FTA will be*, the sectors that will receive the most welfare gain from an FTA with the US are food products, footwear, textile and clothing, and to some extent, live animals as well as transport equipment. The shares of the aforementioned sectors in the total exports of the Philippines to the US, however, are still small.

#### **4.2.2. RoT 2: The higher the trade concentration is, the more welfare-enhancing the FTA will be**

Focusing on the TCI of Philippine exports and imports to the world and to the US, the values declined from 2000 to 2012. Such lower concentration means that the Philippines is not anymore as reliant on specific exports or imports as before. It is more interesting to note however, the change in TCI of Philippine imports from the US. Considering the rule of thumb for the second indicator which states that: *The higher the TCI, the more welfare-enhancing the FTA will be*, Filipino importers from the US will more likely benefit more from a bilateral agreement between the Philippines and the US because the TCI for Philippine imports from the US are higher than that for Philippine imports from the world and that for Philippine exports to the US. Note, however, that this welfare analysis is only based on economic implications and does not take into account political issues that might come with promoting imports.

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<sup>6</sup> [http://tradepartnership.com/pdf\\_files/GSP%20Annual%20Report-February%202013.pdf](http://tradepartnership.com/pdf_files/GSP%20Annual%20Report-February%202013.pdf)

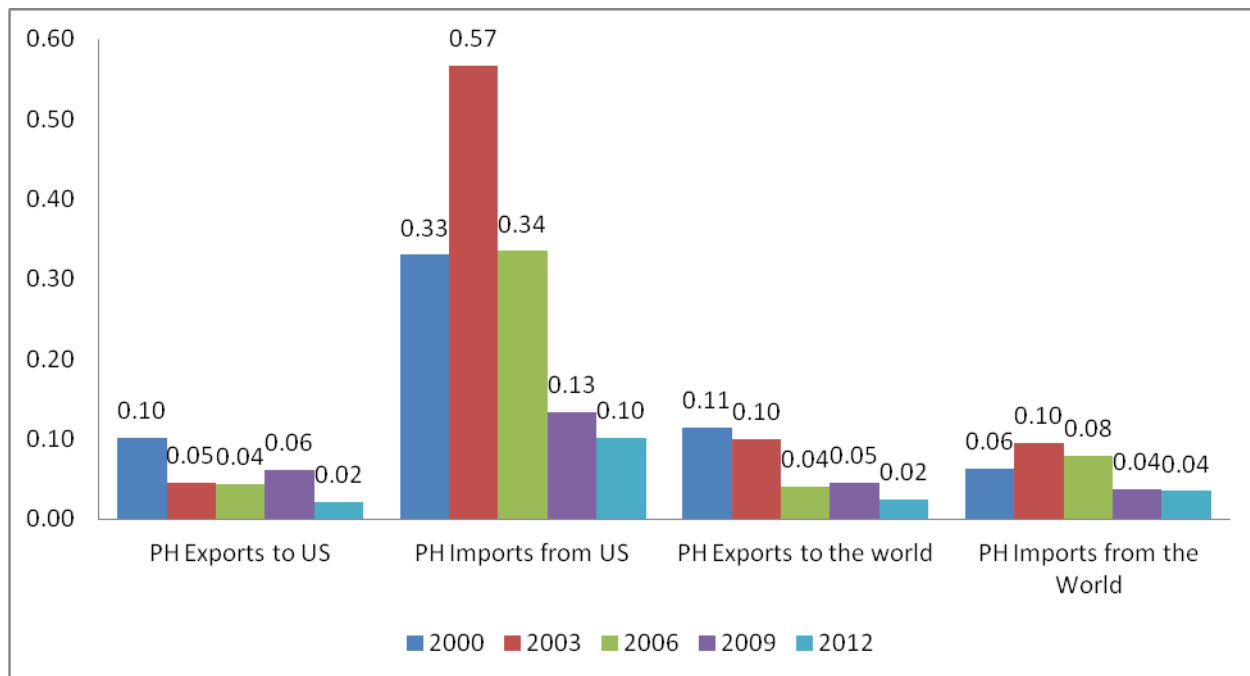


Figure 4.9. Concentration of Philippine exports and imports, 2000-2012.

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift.

Moreover, lower TCI may also mean diversification in the products traded by the Philippines, as shown in figure 4.10 below. The lower concentration of Philippine exports to the world and to the US in latter years is due to the lower share of electrical and electronic equipment as well as nuclear reactors, boilers, and other machinery. This implies lesser exposure to economy-wide effects arising from particular shocks in key sectors. However, the share of electrical and electronic equipment as well as nuclear reactors, boilers, and machinery in total Philippine imports from the US remained high, accounting for the high TCI.

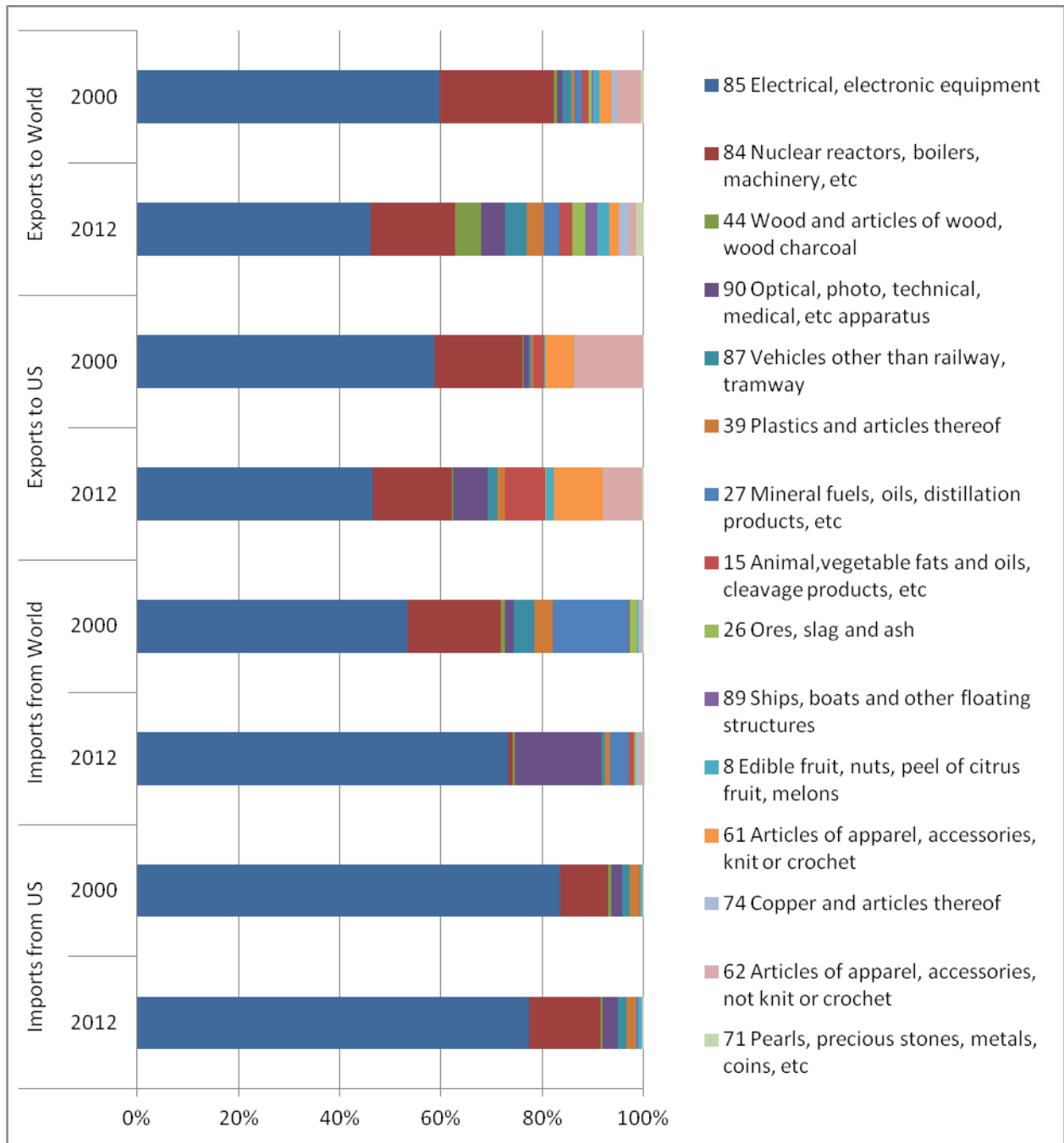


Figure 4.10. Trend in the share of 2-digit commodities in Philippine trade with the US and the world.

**4.2.3. RoT 4: The wider the difference in Revealed Comparative Advantage, the more welfare-enhancing the FTA will be**

The top 10 Philippine exports to the US in 2012 are shown in Table 4.10, together with the tariff applied by the US on these products, the share of these products on export, the revealed comparative advantage of the Philippines and the US on these products, as well as the intra-industry trade index for these products. The top 10 products make up a total of 40.5 percent of total Philippine exports to the US. Out of the top 10, eight are under the group of machinery and electrical equipment and parts, while the other two are coconut products. It is also worth noting that some of the top Philippine exports to the US are also among the top exports of the Philippines to the world, especially those that are parts and components of machinery and electrical equipment.

Also, the US does not have a comparative advantage on these products in 2012, except for monolithic integrated circuits. Philippine-US trade of this commodity is in fact more intra-industry in nature (IIT of 0.35). This means that there are more components or variations under this 6-digit commodity classification. But more importantly, the export products in which the Philippines has the highest RCA relative to the US are electronic microassemblies (363.25 vis-à-vis 0), coconut (copra) oil crude (164.29 vis-à-vis 0.09), and coconut (copra) oil or fractions simply refined (109.26 vis-à-vis 0.26). Filipino exporters of these products will most likely benefit most from a bilateral agreement because based on the computed RCAs, *The wider the difference, the more welfare-enhancing the FTA will be.* But because the tariffs on these are already zero, the source of welfare from an FTA agreement could come from the dynamic gains from trade, like innovations and increase in productivity due to better technology, etc.

Another interesting insight is that the intra-industry trade between the Philippines and the US in these products is very low as shown by the IIT indices of almost zero. This is because in products where there is disparity in revealed comparative advantage between two countries, there is more room for inter-industry trade than intra-industry trade.

Table 4.10. Top 10 Philippine exports to US in 2012.

HS Code	Product Name	US Tariff	Exports (million USD)	Exports Share	PH RCA	US RCA	IIT
850440	Static converters, not elsewhere specified	0%	473	6.39%	7.93	0.82	0.056
854430	Ignition/other wiring sets for vehicles/aircraft	0%	400	5.40%	17.88	0.77	0.016
847160	I/O units w/n storage unit	0%	342	4.62%	8.58	0.73	0.003
854230	Monolithic integrated circuits	-	338	4.57%	5.18	1.08	0.350
854250	Electronic microassemblies	-	328	4.42%	363.25	0.00	0.001
151319	Coconut (copra) oil or fractions simply refined	0%	294	3.97%	109.26	0.26	0.000
847170	Storage units	0%	273	3.68%	6.90	0.96	0.032
854140	Photosensitive/photovoltaic/LED semiconductor devices	0%	238	3.21%	5.67	0.57	0.002
851711	Line telephone sets, cords	-	172	2.32%	24.57	0.41	0.000
151311	Coconut (copra) oil crude	0%	143	1.93%	164.29	0.09	0.000

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift; tariff data from the Market Access Map of the International Trade Centre.

While the top 10 Philippine exports to US only make up 40 percent of the total, the top 10 Philippine imports from the US in 2012 already make up 71.57 percent of the total as noted in Table 4.11. This supports the fact that Philippine imports from the US are more concentrated than Philippine exports to the US. Also, the top import product, monolithic integrated circuits, with a share of 21.02 percent to total imports, was also among the top Philippine exports to the US. This proves the presence of intra-industry trade between the Philippines and the US for monolithic integrated circuits (IIT index of 0.350).

Moreover, unlike the top Philippine exports to the US where the IIT indices are almost zero, other products imported by the Philippines from the US show some traces of intra-industry trade with IIT indices between 0.3 to 0.5 parts and accessories of data processing equipment (0.353), metal oxide semiconductor (0.417), and parts of machines and mechanical appliances not elsewhere specified (0.5). Also, the Philippines does not necessarily have a comparative disadvantage in the products that it imports most from the US; in fact, out of the top 10 imports, the Philippines has a comparative advantage in five of them (using RCA as an indicator). The Philippines has an RCA greater than 1 for monolithic integrated circuits (5.18), parts of electronic integrated circuits (5.85), parts and accessories of data processing equipment (3.24), metal oxide semiconductor (365.0), and parts of machines and mechanical appliances (11.19).

Also, the RCA index tells us that the US does not even have a revealed comparative advantage in parts of electronic integrated circuits, fixed wing aircraft and metal oxide semiconductor and yet we import these products from the US. The case of metal oxide semiconductor is even more peculiar because even though the US has an RCA of zero while the Philippines has a very high RCA, there still exists intra-industry trade between the two countries in this product. It may be that the US only exports this to the Philippines while the Philippines exports this to the rest of the world. The production of this good must be highly specialized, a fact that might be more evident with finer disaggregation.

The only products imported at zero tariff were parts of electronic integrated circuits and parts and accessories of data processing equipment. Aside from parts and components of transportation and electrical machinery and equipment, our other top imports from the US include wheat and meslin, soya-bean oil-cake and other solid residues, milk powder, and other products for food preparations. These other imports received tariff rates of 1 to 5 percent.

Table 4.11. Top 10 Philippine imports from US in 2012.

HS Code	Product Name	PH Tariff	Imports (million USD)	Imports Share	PH RCA	US RCA	IIT
854230	Monolithic integrated circuits	-	1,596	21.02%	5.18	1.08	0.350
854290	Parts of electronic integrated circuits etc	0%	1,490	19.64%	5.85	0.97	0.049
880240	Fixed wing aircraft, unladen weight > 15,000 kg	3%	614	8.08%	0.00	0.23	0.000
100190	Wheat except durum	4%	528	6.96%	0.00	2.21	0.000

	wheat, and meslin						
230400	Soya-bean oil-cake and other solid residues	3%	479	6.31%	0.02	1.49	0.000
847330	Parts and accessories of data processing equipment	0%	253	3.34%	3.24	1.54	0.353
854213	Metal oxide semiconductor	-	179	2.36%	365.60	0.00	0.417
40210	Milk powder < 1.5% fat	1%	150	1.98%	0.02	1.87	0.000
847990	Parts of machines and mechanical appliances not elsewhere specified	1%	87	1.15%	11.19	1.52	0.500
210690	Food preparations not elsewhere specified	5.9%	55	0.73%	0.43	1.61	0.238

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift; tariff data from the Market Access Map of the International Trade Centre.

#### **4.2.4. RoT 5 and 6: The higher the Intra-industry Trade and Finger-Kreinin Index, the more welfare-enhancing the FTA will be**

The similarity between the export structures of the Philippines and the US slightly increased from 2000 to 2012 as shown in Figure 4.11. As the FK index approaches 1, there are greater chances that the export structures of two countries are almost identical; and if the index is 0, then the structures are completely divergent. Given the 0.194 FK index between the Philippines and the US in 2012, both inter-industry trade and intra-industry trade would be beneficial for both countries. Nonetheless, the very high IIT index between the Philippines and the US at 0.748 in 2000 and 0.988 in 2012 give us an idea that they are in fact already engaging in a wide value chain activity. The IIT index of almost 1 in 2012 despite only roughly 20 percent similarity in export structures between the Philippines and the US tells us that most trade takes place within rather than between industries<sup>7</sup>.

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<sup>7</sup> On a commodity-specific basis, IIT is highest where both the PH and the US has a comparative advantage. On the contrary, in commodities where there is a wide difference between the RCA of the Philippines and that of the US, it is inter-industry trade that exists, like in the case of the top Philippine exports to the US.



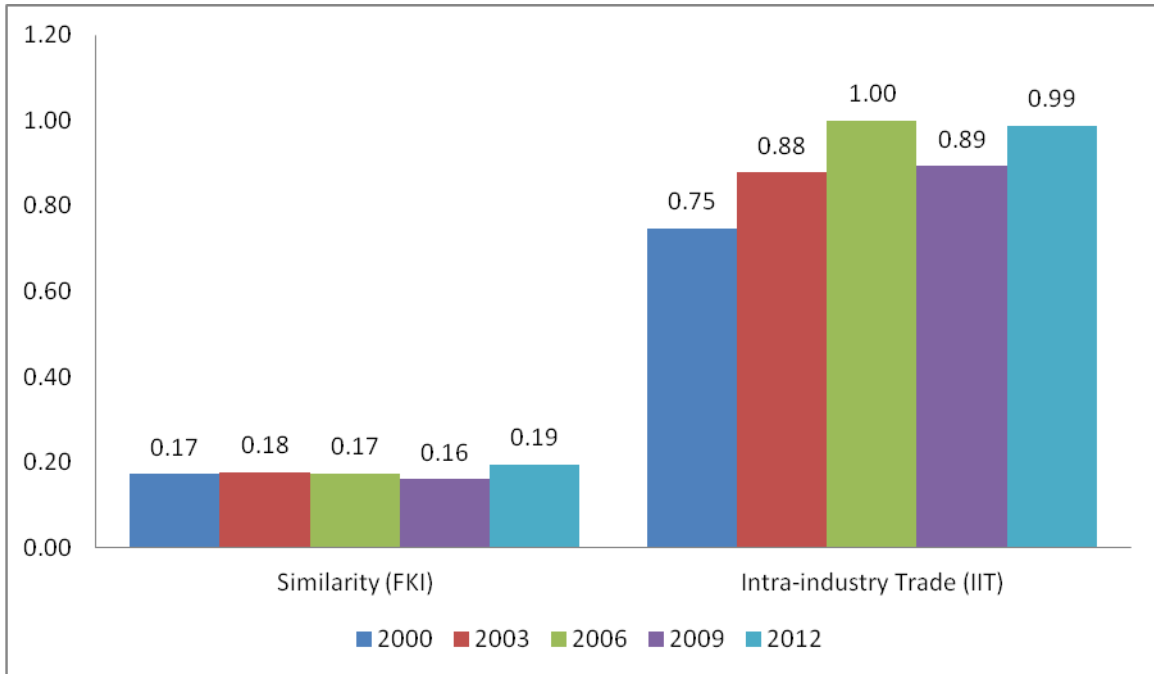


Figure 4.11. FKI and IIT between Philippines and US, 2000-2012.  
 Calculated Using Tradesift; Basic Data: UN Comtrade.

The finding that there is very high overall intra-industry trade between the Philippines and the US is further supported by the breakdown of the 2012 Philippine exports to the US by production stage. As shown in Figure 4.12, most of the Philippine exports are intermediate products and therefore form part of the supply chain.

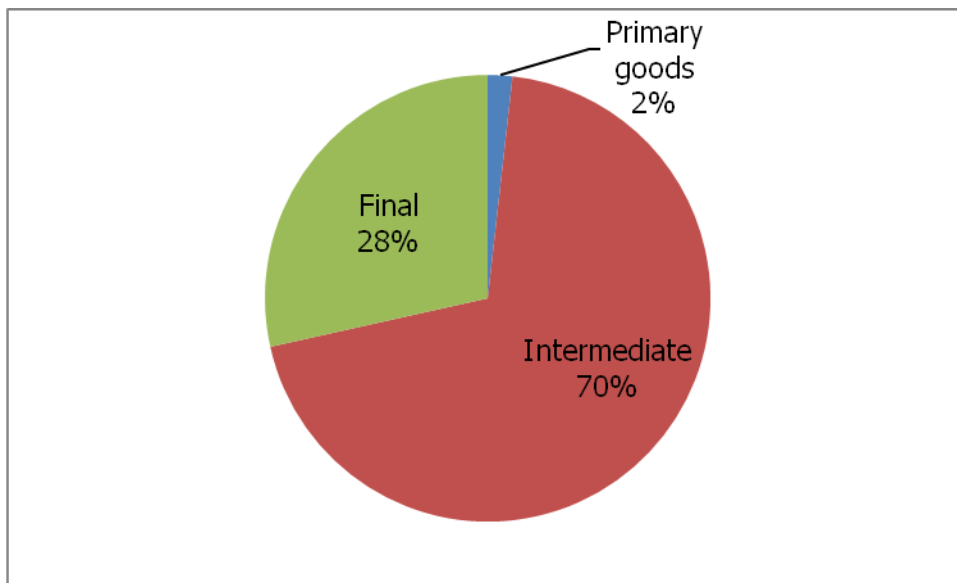


Figure 4.12. Philippine exports to the US by production stage, 2012.  
 Source of basic data: Research Institute of Economy, Trade and Industry, IAA.

Table 4.12 provides the list of the sectors in which intra-industry trade takes place between the Philippines and US in 2012. Aside from the expected high IIT index for some parts and components of machinery and electrical equipment, there was also intra-industry trade in some preserved fruits and vegetables, some inorganic chemicals in the form of rare gases, some household items made of aluminum, and even pieces of furniture. It is also worth noting that in the products where IIT are the highest, the US has a higher RCA than the Philippines except for parts of electric accumulators. Nevertheless, because *the higher the IIT index, the more welfare-enhancing the FTA will be*, producers of the items listed in Table 4.16 will be the ones benefitting from a bilateral agreement.

It is interesting to note that the most intense intra-industry trade happens in industries where the Philippines and US RCA have a large disparity, e.g., waste or scrap of unbleached kraft or paperboard, electrical multimeters, table, kitchen and household, rare gases other than argon, etc. This is as opposed to trade theory which states that intra-industry occurs in sectors where countries both have comparative advantage. One possible explanation of this is that the aforementioned commodities are produced by the Philippines especially for the US only. Thus, even if Philippines does not have comparative advantage relative to the world, it still has high IIT with the US. Another possible reason would be the aggregation used in the analysis. This analysis used 6-digit commodity classification. A finer disaggregation such as 8-digit or 10-digit will probably give us a better understanding of this puzzle.

Table 4.12. Philippine and US intra-industry trade in 2012<sup>8</sup>.

HS Code	Product Name	IIT	PH RCA	US RCA
841330	Fuel, lubricating and cooling pumps for motor engines	1.00	0.87	1.14
903089	Electrical measurement instruments	0.99	0.82	2.54
470710	Waste or scrap of unbleached kraft or paperboard	0.99	0.19	3.18
903031	Electrical multimeters	0.99	0.32	2.93
761519	Table, kitchen, and household	0.99	0.00	0.82
850790	Parts of electric accumulators, including separators	0.99	0.97	0.43
280429	Rare gases other than argon	0.98	0.01	1.58
850431	Transformers electric, power capacity < 1 KVA	0.98	0.19	0.36
200190	Veg, fruit, nuts prepared or preserved by vin/acetic acid	0.98	0.05	1.44
940390	Furniture parts	0.98	0.09	0.60

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift.

However, there is still some room for potential trade between the two countries. At present, there are still products that the US imports from the rest of the world but not from the Philippines, even though these are exported by the Philippines. In any possible trade agreement between the Philippines and the US, these are sectors where the welfare gains from preferential trade could still be reaped. The top products that can be exported by the Philippines to the US if given preference under an FTA are shown in Table 4.13. This list was derived after matching the

<sup>8</sup> The list of sectors with the highest IIT is different from the top 10 Philippine-US export and import lists.

imports of the US from the rest of the world that the Philippines also exports to the rest of the world. For the complete list, please refer to the Appendix.

Table 4.13. Top 10 Potential Philippine Exports to the US.

HS Code	Product Name	Share in total PH exports to US
271000	Petroleum oils & oils obtained from bituminous minerals, other than crude etc.	0.89%
441810	Windows, French-windows, frames, of wood	0.47%
260300	Copper ores and concentrates	0.44%
290244	Mixed xylene isomers	0.31%
310520	Fertilizers containing nitrogen, phosphorus & potassium in packs weighing <=10kg	0.18%
290230	Toluene	0.12%
170240	Glucose including syrup of 20%-50% dry state by weight of fructose	0.08%
730900	Reservoirs/tanks/vats/etc, iron/steel capacity > 300 L (ex liquid/compress gas type)	0.06%
480100	Newsprint	0.03%
190110	Infant foods of cereals, flour, starch or milk, re...	0.03%

Source: Author's calculations using Comtrade data. (For the complete list, please refer to the Appendix)

Likewise, there are also products imported by the Philippines from the rest of the world but not from the US; with an FTA, the Philippines could import these products instead from the US. These products were determined by matching the products imported by the Philippines from the rest of the world to the products that the US exports to the rest of the world. Table 4.14 shows a list of the said products. Of course, this analysis only looks at trade flows and does not consider other transaction costs such as transportation costs. For the complete list, please refer to the Appendix.

Table 4.14. Top 10 Potential Philippine imports from the US.

HS Code	Product Name	Share in total PH imports
100190	Wheat except durum wheat, and meslin	1.5%
260300	Copper ores and concentrates	1.3%
270119	Coal except anthracite or bituminous, not agglomerated	1.1%
230400	Soya-bean oil-cake and other solid residues	1.1%
271119	Petroleum gases & gaseous hydrocarbons not elsewhere specified, liquefied	0.7%
100630	Rice, semi-milled or wholly milled	0.6%
210690	Food preparations not elsewhere specified	0.6%
040210	Milk powder < 1.5% fat	0.5%
271490	Bitumen and asphalt, asphaltites and asphaltic roc...	0.3%
280700	Sulphuric acid; oleum	0.3%

Source: Author's calculations using Comtrade data. (For the complete list, please refer to the Appendix)

#### **4.2.5. Main conclusions for Philippine-US bilateral trade in the context of the TPP**

Based on the indicators, the following main conclusions are drawn: the share of the US in Philippine imports and exports as well as the share of the Philippines in US imports and exports is declining through time, partly due to the greater trade created between the Philippines and other East Asian economies; with an FTA, the Philippines and the US might regain market share in the exports and imports of the other, especially in sectors that are not part of the East Asian production network. Nonetheless, the overall tariffs between the US and the Philippines are already quite low even without an FTA.

##### *Magnitude of Tariff before the Agreement*

US tariffs on Philippine exports are already low. This can be seen in the products that had the highest share in trade flows between the US and the Philippines such as electrical equipment and machinery. Should the Philippines join the TPP, some sectors with high tariffs that might benefit from an FTA with the US are those that are not yet being prioritized in the GSP that the US government granted the Philippines. Considering that the rule of thumb for the first indicator states that: *The higher the tariff, the more welfare-enhancing the FTA will be*, the sectors that will receive the most welfare gain are food products (15.81% of total exports in 2012), footwear (0.001%), textile and clothing (14.05%), and to some extent, live animals (0.012%). With the relative importance of these commodities in the export basket of the country, one can infer that the benefit of a PH-US FTA is limited, at least from the Philippine's interests.

##### *Trade Concentration*

In terms of products, the concentration of trade between the Philippines and the US has already declined through time. Products traded between the two countries have already diversified, even without a bilateral trade agreement. However, considering the rule of thumb for the second indicator which states that: *The higher the TCI, the more welfare-enhancing the FTA will be*, this only means that Philippines will have a difficult time in negotiating its offensive interests. Nevertheless, Filipino importers from the US will more likely benefit more from a bilateral agreement between the Philippines and the US because the TCI for Philippine imports from the US are higher than that for Philippine imports from the world and that for Philippine exports to the US. Note, however, that this welfare analysis is only based on economic implications and does not take into account political issues that might come with promoting imports.

##### *Revealed Comparative Advantage*

For the top Philippine export products to the US, which were components of electrical equipment and machinery as well as coconut products, the Philippines has a comparative advantage in these products while the US does not. The Philippines has the highest RCA relative to the US in electronic microassemblies (363.25 vis-à-vis 0), coconut (copra) oil crude (164.29

vis-à-vis 0.09), and coconut (copra) oil or fractions simply refined (109.26 vis-à-vis 0.26). Filipino exporters of these products will most likely benefit most from a bilateral agreement because based on the computed RCAs, *The wider the difference, the more welfare-enhancing the FTA will be*. Nonetheless, due to the low US tariffs which are currently levied on these goods, the welfare enhancing effects of an FTA will be limited.

The Philippines is also competitive in some of its imports from the US that are components of electrical machinery and equipment. On the other hand, the US is more competitive in the food products and transport equipment that it exports to the Philippines. These are the sectors in which gains from joining the TPP may be reaped by Filipino importers. Note, however, that this welfare analysis is only based on economic implications and does not take into account political issues that might come with promoting imports.

#### *Intra-industry Trade and Finger-Kreinin Index*

The sectors in which intra-industry trade exists between the Philippines and the US has changed through time, and the overall IIT index between the two countries has also increased. From this point of view, both intra-industry trade and inter-industry trade already exist and can only be intensified through an FTA.

In summary, an FTA between the Philippines and the US will certainly increase trade albeit marginally. Trade indicators suggest that the potential incremental export benefits for the Philippines are limited because the US tariffs are already low. Most of the Philippine exports to the US are in zero or low tariff brackets. Nevertheless, sectors present in the production supply chain would benefit from Philippine participation in the TPP, since the TPP could be a possible production hub.

Some recent studies corroborate the findings of this section. For example, Cororaton and Orden (2014) tried to quantify the benefits that will be reaped by the textile and wearing apparel sector, as well as the services, petroleum, utilities, and chemical sectors through the reduction in tariff and non-tariff barriers brought by Philippine participation in the TPP. Likewise, this study used the current magnitude of tariffs to indicate the possible welfare gain in food products, footwear, textile and clothing, and to some extent, live animals as well as transport equipment. However, Cororaton and Orden (2014) stated that these gains come at the cost of other sectors like agriculture, mining, food manufacturing, metal products, and transport equipment and machinery due to greater competition from imports. On the contrary, based on the revealed comparative advantage index, the US is deemed more competitive in the food products and transport equipment than the Philippines; therefore, these are also sectors in which gains from joining the TPP may be reaped by Filipino importers.

### **4.3. Impact of third country FTAs on the Philippines**

As we have seen, Philippine exports are heavily skewed to the US relative to other TPP members. In 2000, about 30.0 percent of the Philippine exports go to US alone. Next to US, Japan is the second top destination of the Philippine exports among the TPP members, getting a

share of 14.7 percent of the total Philippine exports. However, after more than a decade, the export markets of the Philippines diversified. The value of Philippine exports that go to Japan (19.0%) became higher than those that go to US (14.2%) and the share of the rest of the world excluding the TPP members rose from 42.7 percent in 2000 to 51.2 percent in 2012. Although this is the case, the importance of the US market to the Philippines is still undeniable. Hence, it is important to study the events that may likely affect the Philippines-US trade landscape in the future.

The TPP agreement would, of course, affect bilateral trade between the Philippines and the US. Thus, while the first part of the analysis posits the possible advantages and disadvantages of joining the TPP agreement, this section highlights the probable implications to the Philippines for being excluded from the TPP. The TPP can be viewed as a pool of FTAs between the US and the other TPP members (i.e., US-Australia, US-Canada, US-Chile, US-Japan, US-Malaysia, etc.). Such FTAs may threaten the current PH-US bilateral trade depending on preference erosion, trade diversion and/or trade re-orientation effects. How likely and significant the impact would be, nevertheless, depends on a number of indicators.

The rules of thumb governing the third country impact analysis are the first and sixth rules of thumb. The first rule of thumb evaluates the tariff prior to the agreement which can help infer the probable preference erosion while the sixth rule of thumb states that the more similar are excluded countries' trading structures to those of the proposed preferential partner, the higher the probability of trade diversion occurring.

#### **4.3.1. RoT 1: Magnitude of tariff prior to the agreement and the possibility of preference erosion**

Under the RoT 1 for the third country impact analysis, there are three possible scenarios: (a) no negative effect on excluded country; (b) trade re-orientation effect; and (c) trade diversion effect. The first outcome is expected to happen if and only if prior to TPP, the Philippines and the TPP members exporting to US are already facing zero tariffs. The second outcome is possible, on the other hand, if Philippines has a zero tariff access to US market while the other TPP members have positive US tariff. Consequently, once the agreement pushes through, these TPP members will have the same access as the Philippines. Finally, trade diversion can only occur if the Philippines and the TPP members are charged with the same positive US tariff prior to agreement.

Looking at the US Generalized System of Preferences (GSP), presently there are 123 beneficiary countries under the program, in which one-third are least developed. There are 4,981 number of 8-digit US tariff lines eligible for duty-free entry under GSP<sup>9</sup>. Of these, only 3,509 tariff lines are eligible for all GSP beneficiaries.

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<sup>9</sup> For the complete list of US GSP eligible products, refer to [http://www.ustr.gov/sites/default/files/GSP%20eligible%20all%20BDCs%20\(2012\)%20Revised%20August%202012.pdf](http://www.ustr.gov/sites/default/files/GSP%20eligible%20all%20BDCs%20(2012)%20Revised%20August%202012.pdf)

In 2013, the top GSP products by value include motor vehicle parts (\$470 million), ferroalloys (\$449 million), rubber tires (\$360 million), crude petroleum oil (\$308 million), precious metal jewelry (\$275 million), and corn or maize (\$273 million). On the other hand, with respect to the top GSP beneficiary developing countries according to export value, the top 10 countries are India (\$2.5 billion), Thailand (\$2.0 billion), Brazil (\$1.4 billion), Indonesia (\$1.2 billion), Turkey (\$742 million), Philippines (\$707 million), South Africa (\$650 million), Angola (\$369 million), Russia (\$296 million), and Pakistan (\$160 million) (United States Trade Representative, 2013). It is also important to take note that all TPP members are currently not eligible to US GSP.

Thus, with the forthcoming TPP agreement, a trade re-orientation may likely happen. There could be substitution across suppliers which would lead to increases in the market share of TPP members at the expense of the Philippines. For sure, this would affect 9.5 percent of the total Philippine exports to US which enjoys the GSP benefits. Moreover, such preference erosion will have a significant impact if the Philippines has a similar export structure with the TPP members.

#### **4.3.2. RoT 6: The more similar are excluded countries' trading structures to those of the proposed preferential partner, the higher the probability of trade diversion occurring**

The FK index tells us the degree of the similarity of the export structure and comparative advantage between the Philippines and a TPP member. It examines the similarity of countries across all tariff lines at 6-digit level of classification. Table 4.15 presents the FK index of the Philippines with each TPP member in 2012. The second and third columns indicate the similarity of the Philippine's and the TPP member's exports to the US market and World market, respectively.

It can be observed that in general, the Philippines and the TPP members, except Vietnam, have greater similarity in their exports to the world as compared to their exports to US in 2012. Vietnam has a more similar export structure with the Philippines when it comes to exporting to US. Moreover, among the TPP members, Malaysia, Vietnam, Singapore, Mexico, and Japan have more similarity with the Philippines in their exporting structures to the US. Malaysia's exports to the US is 25 percent similar with the Philippines; while Vietnam, Singapore, Mexico, and Japan are 22 percent, 19 percent, 14 percent, and 12 percent, respectively, similar with the Philippines. The FKI values of these aforementioned countries are all above the average of all the selected countries (0.11). This implies that these five TPP members have the potential of displacing Philippine exports to US over time. Meanwhile, the other TPP members are only 1 to 7 percent (which is below average) similar to the Philippines exporting structure to the US.

Table 4.15. Similarity of the exports of Philippines and TPP member to the US and to the World, in 2012.

	All Products	
	US Market	World Market
PH-Australia	0.067	0.104
PH-Brunei	0.013	0.023
PH-Canada	0.072	0.128
PH-Chile	0.030	0.075
PH-Japan	0.117	0.221
PH-Malaysia	0.253	0.320
PH-Mexico	0.138	0.193
PH-New Zealand	0.045	0.090
PH-Peru	0.063	0.087
PH-Singapore	0.188	0.268
PH-Vietnam	0.220	0.208

Note: Average FKI = 0.11

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift.

To explicitly gauge the extent of the competitive pressure that the Philippines is likely to feel once the TPP takes place, the relative export competitiveness pressure index (RECPI) is calculated. This indicator suggests the comparative size of the competitor in terms of export flows to a destination market. Table 4.16 presents the RECPI of the Philippines relative to each TPP member in 2012.

Again, we see that in the values of the indicator in the world market is higher than the values in the US market except for PH-Mexico. This implies that there are more exports of the TPP members that compete with the Philippines in the world as compared to those exerting pressures in the US market. For instance, in the products which Philippines exports to the US in 2012, the size of Australia's exports is only 4 percent of the total size of the Philippines. This implies that Philippines is larger than Australia in the products that are of importance to the Philippines. The same goes for Brunei, Chile, New Zealand, and Peru. They do not have substantial export pressures for the Philippines in the US market since they have relatively insignificant export volume in products that are important in the PH-US bilateral trade.

Most of the competitiveness pressure, however, is more likely to come from Mexico, Japan, Singapore, Canada, Malaysia, and Vietnam. All of these countries except Vietnam have greater export flows to the US relative to the Philippines. Mexico, Japan, Singapore, Canada, and Malaysia's volume of exports (exports which matter the most for the Philippines) is 430 percent, 168 percent, 155 percent, 115 percent and 106 percent higher than the Philippines, respectively. Vietnam on the other hand is 45 percent of the size of the Philippines. One can expect intense pressure to the Philippines coming from these countries once the TPP is implemented. It is interesting to note at this point that although Canada is only 7 percent similar to the export structure of the Philippines to the US as suggested by the previous indicator, it can still significantly pressure the Philippine exports in the US market since it has greater export flows.



Table 4.16. Export competitiveness pressure in 2012.

	All Products	
	US Market	World Market
PH-Australia	0.035	0.376
PH-Brunei	0.000	0.058
PH-Canada	1.152	1.155
PH-Chile	0.022	0.240
PH-Japan	1.676	3.341
PH-Malaysia	1.057	2.542
PH-Mexico	4.296	1.045
PH-New Zealand	0.008	0.025
PH-Peru	0.015	0.083
PH-Singapore	1.547	6.774
PH-Vietnam	0.454	0.416

Source: COMTRADE HS 1996 – 6 digits, calculated using Tradesift.

Taking note of the prospective TPP members that can threaten the Philippines competitiveness in the US market, the following specific list of Philippine commodities that are most likely to be affected by the TPP is generated. Table 4.17 shows the 6-digit commodities in which competitive pressures are to be expected. It also determines where such pressures come from. Since we have previously identified Mexico (MEX), Japan (JAP), Singapore (SNG), Canada (CAN), Malaysia (MYS), and Vietnam (VNM) as the biggest threats to Philippine exports among the TPP members, these are the only countries considered in the table. Furthermore, the table indicates how important these affected commodities in the Philippines export basket to the US by providing the export value and share of the commodity. Finally, it includes the US simple average MFN for each commodity. This can signal whether the pressures coming from the six TPP members are significant or not. The benchmark would be: if the Philippine commodity enjoys zero tariff access in US market already then the pressure coming from the competitive TPP members is not significant. It should be noted, nonetheless, that the table only includes the top commodities (rank according to share) that comprise 80 percent of the Philippine export basket to the US. The complete list of the affected commodities can be accessed in the Appendix.

Among the top 80 percent Philippine exports to the US, only 44 lines are dutiable (35.22% of total exports) and, therefore, are prospects for competitive pressure. Two of these commodities, namely, prepared tuna, skipjack, bonito (160414) and baby garments, accessories of cotton, not knit (620920) which make up 1.5 percent of the total Philippine exports will face competition from four TPP member. The common competitors for these commodities are Mexico, Canada, and Vietnam. Meanwhile, about 3.4 percent of the top Philippine exports to the US will have to struggle against five TPP members. These dutiable lines are photographic, other than cinematographic cameras (900659), mucilage and thickeners (130239), flanges stainless steel (730721), pipe fittings, butt welding of stainless steel (730723), equipment for automatic development of photo film (901010), and parts of electrical ignition or starting equipment (851190). They will encounter pressures from Mexico, Japan, Singapore, Canada, and Malaysia.

Finally, 36 dutiable lines or 30.4 percent of the most important Philippine exports to US will have to face intense pressure exerted by all six TPP members. Two of which are agricultural commodities namely fruit, edible plants (200899) and prepared or preserved crab (160510).

Table 4.17. List of affected Philippine exports and their importance to the Philippine export basket to the US in 2012.  
(Top 80% exports ranked according to share)

HS Code	Description	Export Value (in million USD)	Export Share	Simple MFN	Competitive Pressure coming from					
					MEX	JAP	SNG	CAN	MYS	VN M
850440	Static converters,	473.46	6.39%	0.43	/	/	/	/	/	/
854430	Ignition/other wiring sets for vehicles/aircraft/ship	399.73	5.40%	2.50	/	/	/	/	/	/
847160	I/O units w/n storage u	342.09	4.62%	0.00	/	/	/	/	/	/
854230	Monolithic integrated circuit	338.37	4.57%	0.00	/	/	/	/	/	/
854250	Electronic microassemblies	327.58	4.42%	0.00						
151319	Coconut (copra) oil or fractions simply refined	294.19	3.97%	0.00	/			/	/	
847170	Storage units	272.77	3.68%	0.00	/	/	/	/	/	/
854140	Photosensitive/photovoltaic/LED semiconductor devices	237.63	3.21%	0.00	/	/	/	/	/	/
851711	Line telephone sets	171.97	2.32%	0.00	/		/	/	/	/
151311	Coconut (copra) oil crude	143.11	1.93%	0.00	/	/		/	/	/
852990	Parts for radio/tv transmit/receive equipment	135.18	1.83%	1.59	/	/	/	/	/	/
847130	Portable digital data pr	117.3	1.58%	0.00	/	/	/	/	/	/
900659	Photographic, other than cinematographic cameras	100.01	1.35%	3.60	/	/	/	/	/	
200820	Pineapples, otherwise prepared or preserved	99.82	1.35%	0.00	/		/	/	/	/
870899	Motor vehicle parts	96.49	1.30%	0.59	/	/	/	/	/	/
910211	Wrist-watch, base-metal case, battery, with hands	86.89	1.17%	0.00	/	/	/	/		
730410	Pipes, line, iron or steel, for oil or gas pipelines	84.37	1.14%	0.00	/	/	/	/	/	/
160414	Tuna, skipjack, bonito, prepared/preserved, not minced	81.5	1.10%	11.73	/	/		/		/
610690	Women's, girls' blouses and shirts, of material, knit	72.46	0.98%	6.20	/	/	/	/	/	/
850490	Parts of electrical transformers and inductors	64.91	0.88%	0.69	/	/	/	/	/	/
170111	Raw sugar, cane	61.04	0.82%	0.00	/	/		/		
401110	Pneumatic tires new of rubber for motor cars	60.08	0.81%	3.70	/	/	/	/	/	/
80111	Coconuts, desiccated	58.26	0.79%	0.00	/		/	/	/	/
903180	Measuring or checking equipment	56.25	0.76%	0.57	/	/	/	/	/	/

620520	Men's, boys' shirts, cotton not knit	56.14	0.76%	14.20	/	/	/	/	/	/
200940	Pineapple juice, not fermented or spirited	55.47	0.75%	0.00	/	/	/	/	/	/
340290	Organic surfactant washing, cleaning preparations	55.16	0.74%	2.88	/	/	/	/	/	/
847330	Parts and accessories of data processing equipment	54.3	0.73%	0.00	/	/	/	/	/	/
610610	Women's, girls' blouses and shirts, cotton/knit	54.03	0.73%	19.70	/	/	/	/	/	/
854150	Semiconductor devices, not light sensitive or emitting	52.6	0.71%	0.00	/	/	/	/	/	/
900150	Spectacle lenses of other materials	49.48	0.67%	2.00	/	/	/	/	/	/
620443	Women's, girls' dresses, synthetic fibres, not knit	49.15	0.66%	12.32	/	/	/	/	/	/
620462	Women's, girls' trousers and shorts, cotton not knit	48.44	0.65%	8.15	/	/	/	/	/	/
854213	Metal oxide semiconductor	47.09	0.64%	0.00						
30342	Tunas (yellowfin) frozen, whole	46.55	0.63%	0.00	/	/	/	/	/	/
950430	Games, coin or disc operated	46.43	0.63%	0.00	/	/	/	/	/	/
391000	Silicones in primary forms	40.07	0.54%	1.50	/	/	/	/	/	/
940360	Furniture, wooden	39.41	0.53%	0.00	/	/	/	/	/	/
130239	Mucilages and thickeners	38.45	0.52%	3.20	/	/	/	/	/	/
854129	Transistors, except photosensitive, > 1 watt	38.3	0.52%	0.00	/	/	/	/	/	/
854290	Parts of electronic integrated circuits etc	37.27	0.50%	0.00	/	/	/	/	/	/
200899	Fruit, edible plants otherwise prepared/preserved	36.45	0.49%	6.41	/	/	/	/	/	/
610443	Women's, girls' dresses, of synthetic fibres, knit	36.08	0.49%	15.45	/	/	/	/	/	/
611030	Pullovers, cardigans etc of manmade fibres, knit	35.48	0.48%	15.32	/	/	/	/	/	/
420321	Leather, composition sports gloves, mittens and mitts	35.33	0.48%	2.82	/	/	/	/	/	/
901820	Ultra-violet or infra-red ray apparatus	34.72	0.47%	0.00	/	/	/	/	/	/
730721	Flanges, stainless steel	32.63	0.44%	2.97	/	/	/	/	/	/
160510	Crab, prepared or preserved	31.19	0.42%	3.75	/	/	/	/	/	/
730723	Pipe fittings, butt welding of stainless steel	31.13	0.42%	2.50	/	/	/	/	/	/
847990	Parts of machines and mechanical appliances not elsewhere specified	28.96	0.39%	0.00	/	/	/	/	/	/
853120	Indicator panels incorporating electronic displays	28.89	0.39%	0.00	/	/	/	/	/	/
610510	Men's, boys' shirts, of cotton, knit	28.88	0.39%	19.70	/	/	/	/	/	/
611020	Pullovers, cardigans etc of cotton, knit	28.49	0.38%	10.75	/	/	/	/	/	/

910219	Wrist-watch, base-metal case, battery, other	28.09	0.38%	0.00	/	/	/	/		
853690	Electrical switch, protector, connector for < 1kV	27.82	0.38%	0.90	/	/	/	/	/	/
853890	Parts, electric switches, protectors and connectors	27.82	0.38%	1.56	/	/	/	/	/	/
620920	Babies garments, accessories of cotton, not knit	27.14	0.37%	12.73	/		/	/		/
901831	Syringes, with or without needles	27.04	0.37%	0.00	/	/	/	/		
903090	Parts and accessories, electrical measuring instruments	26.89	0.36%	0.66	/	/	/	/	/	/
620640	Women's, girls' blouses, shirts, manmade fibre, not knit	26.85	0.36%	14.07	/	/	/	/	/	/
901010	Equipment for automatic development of photo film	25.17	0.34%	2.40	/	/	/	/	/	
853650	Electrical switches for < 1,000 volts, not elsewhere specified	24.7	0.33%	1.08	/	/	/	/	/	/
610442	Women's, girls' dresses, of cotton, knit	24.23	0.33%	11.50	/	/	/	/	/	/
854121	Transistors, except photosensitive, < 1 watt	22.32	0.30%	0.00	/	/	/	/	/	
853710	Electrical control and distribution boards, < 1kV	22.26	0.30%	1.35	/	/	/	/	/	/
851190	Parts of electrical ignition or starting equipment	21.88	0.30%	1.12	/	/	/	/	/	
844390	Parts of printing machinery and ancillary equipment	21.59	0.29%	0.00	/	/	/	/	/	/
200892	Fruit mixtures, otherwise prepared or preserved	21.57	0.29%	0.00	/		/	/		/
420292	Containers, outer surface plastic or textile	21.02	0.28%	9.51	/	/	/	/	/	/
620463	Women's, girls trousers, shorts, synthetic fibres, not knit	20.88	0.28%	11.80	/	/	/	/	/	/
80450	Guavas, mangoes and mangosteens, fresh or dried	20.52	0.28%	0.00	/		/	/		/
852520	Transmit-receive apparatus for radio, TV, etc.	19.26	0.26%	0.00	/	/	/	/	/	/
730799	Fittings, pipe or tube, iron or steel	19.02	0.26%	2.80	/	/	/	/	/	/
610343	Men's, boys' trousers, shorts, of synthetic fibres, knit	18.4	0.25%	21.55	/	/	/	/	/	/
30420	Fish fillets, frozen	17.58	0.24%	0.00	/	/	/	/	/	/
610620	Women, girls blouses & shirts, manmade fibre, knit	15.99	0.22%	23.45	/	/	/	/	/	/
853649	Electrical relays for 60 - 1,000 volts	15.96	0.22%	1.35	/	/	/	/	/	/
621210	Brassieres and parts thereof	15.94	0.22%	10.32	/	/	/	/	/	/

Note: This list contains the affected products which comprise (the top) 80% of the Philippine export basket to the US. (For the complete list, refer to Appendix)

Source: Author's calculations using COMTRADE trade data.

Table 4.18 summarizes the different magnitudes of competitive pressure for Philippine dutiable exports. Threat coming from one TPP member signifies slight competitive pressure while competition coming from the six previously determined TPP members entails extreme pressure. The second column reports the number of Philippine 6-digit dutiable commodity lines that will face competition while the third column presents their share to the Philippine export basket to the US. As shown in the table, 412 dutiable lines or 39.16 percent of total Philippine exports may experience trade diversion in the US market since competitive pressure is expected to come from six TPP members.

Table 4.18. Export competitive pressure to Philippines 6-digit commodity lines.

TPP member exerting pressure	Philippine dutiable commodity lines	Export share
0	1,251	7.92%
1	2	0.00%
2	22	0.06%
3	60	0.52%
4	123	2.75%
5	226	5.27
6	412	39.16%

Source: Author's calculations using COMTRADE trade data.

### 4.3.3. Main conclusions for the impact of third country FTAs on the Philippines

In evaluating the possible impacts of being a non-TPP member to the Philippine-US trade in goods, it is convenient to assume TPP as a pool of FTAs between the US and the other TPP members (i.e., US-Australia, US-Canada, US-Chile, US-Japan, US-Malaysia, etc.). These agreements could pose possible trade diversion and preference erosion at the expense of the Philippines. The significance of these threats depends on: (a) the US MFN tariff and GSP extended to TPP members and the Philippines prior to TPP; (b) similarity of the trade structures between the Philippines and each of the TPP members especially in terms of exporting to the US; and (c) the direct competition exerted by the TPP members to the Philippine exports to US.

In terms of US GSP and MFN, trade re-orientation and trade diversion are most likely to occur at the expense of the Philippines. Trade re-orientation can happen on Philippine commodities which have zero tariff access in US market. This is true for the 9.5 percent of the total export basket of the Philippines which are currently enjoying the US GSP benefits, especially since Philippines is the only eligible beneficiary among the selected countries (TPP + Philippines). Aside from this, trade diversion can also happen on 47.8 percent of Philippine exports. The preference for these dutiable lines may be eroded in favor of the TPP members. Based from these figures, one can infer that Philippines will feel more trade diversion effects than trade re-orientation effects.

Note that for the case where the Philippines will be excluded from the TPP, Cororaton and Orden (2014) identified the textile and wearing apparel, petroleum, construction, services, and equipment sectors to be most adversely affected. As to how exactly will the trade diversion

or reorientation occur, this paper recognized the biggest threats to Philippine exports coming from Mexico, Japan, Singapore, Canada, Malaysia, and Vietnam. Moreover, the actual commodities that will encounter pressure due to competition from these countries were also enumerated; some of which are agricultural commodities and other manufactures.

Such preference erosion will have a significant impact if majority of the Philippine export basket is similar to that of the TPP members. Using the FK index, the Philippines and the TPP members, except Vietnam, have greater similarity in their exports to the world as compared to their exports to US in 2012. Nevertheless, Vietnam has a more similar export structure with the Philippines when it comes to exporting to US. Moreover, among the TPP members, Malaysia, Vietnam, Singapore, Mexico, and Japan have also greater similarity with the Philippines in their exporting structures to the US. This implies the capability of these five TPP members to displace Philippine exports in the US market.

In order to estimate the extent of direct competition that the Philippines will likely face, the relative export competitiveness pressure index (RECPI) is calculated. Similar to the findings of the FK, we see most of the RECPI between the Philippines and each TPP member in the world market is higher than in the US market (except PH-Mexico). This implies that there are more exports of the TPP members that compete with the Philippines in the world relative to the pressures felt by the country in US. In terms of competition in the US market, most of the pressure is more likely to come from Mexico, Japan, Singapore, Canada, Malaysia, and Vietnam which all have greater export flows than the Philippines.

Having determined the prospective TPP members that can pose serious threats to the Philippines in the US market, list of affected Philippine commodities, and their importance to the Philippine export basket, is generated at the 6-digit classification. It is found out that 44.8 percent of the exports are secured while 30.4% will have to face intense pressure exerted by six competitive TPP members. Most of the pressures will come from Mexico and Canada.

## CHAPTER 5

### Conclusions

There is always a sense of apprehension that arises in policy or business circles whenever TPP negotiations are suggested. On one hand, some fear that FTAs could open the floodgates of imports, injuring local industries. Others worry about the possible economic loss in terms of missed opportunities, benefits and progress if a country does not sign up. How reasonable these reactions are, however, depend on many factors. This study is an attempt to frame the debate for the Philippines using indicators. The Sussex framework provides rules of thumb which aids the researchers in establishing: (a) how welfare enhancing a proposed FTA is; and (b) how significant the preference erosion is, on countries that will be excluded from the FTA—in this case, the Philippines. The framework will be applied to a Philippine-US (PH-US) FTA in the context of the TPP.

The first part analyzes the direct effects of a PH-US FTA on the offensive interests of the Philippines in trade in goods. The US as an export destination of the Philippines has become less important over the years. The emergence of China as a market and the intensifying trade relations in the ASEAN has attracted commercial interest of Filipino exporters. In addition, the products traded between the two countries have already diversified, even without a bilateral trade agreement. A PH-US FTA could only reinvigorate bilateral trade flows and enhance market access in US sectors that have relatively high trade barriers. It could intensify further the intra-industry trade, which takes up already a large chunk of Philippine exports to US. The extent of incremental benefit to the Philippines from such an FTA is constrained by the initial level of tariffs. To the extent that US tariffs are already low, particularly in many of the top exports from the Philippines, suggests that the incremental benefit along the market access avenue may be quite limited.

Nevertheless, the US as an export destination of the Philippines has become less important over the years. The emergence of China and East Asian economies as a market and the intensifying trade relations in the ASEAN has attracted commercial interest of Filipino exporters. But this is not necessarily a bad thing. The interest of US on investing in the East and South East Asia has been increasing over the years as the global production network in the region intensifies. This implies that US may have invested in the East and South East Asia already and created their subsidiaries in the region. Consequently, the increase in Philippine exports to East and South East Asian economies (and decrease in its exports to the US) may be, in fact, going to US subsidiaries located in East Asian region.

Aside from the change in Philippine export destinations over the years, there is also a change in the export structure of Philippines to the US. Products traded between the two countries have already diversified, even without a bilateral trade agreement. A PH-US FTA could only reinvigorate bilateral trade flows and enhance market access in US sectors that have relatively high trade barriers. It could potentially intensify further the intra-industry trade, which takes up already a large chunk of Philippine exports to US.

There are a number of interesting features in the intra-industry trade between the Philippines and the US. First, the top 10 Philippine exports to the US have low intra-industry trade indices. Second, in the sectors where there is high intra-industry trade index, Philippines does not have comparative advantage while US has comparative advantage per RCA indicator. These disparities can be explained by the following: for the first concern, a low IIT index of the top 10 exports except monolithic integrated circuits entails that inter-industry trade is predominant in these sectors. These commodities actually comprise 30 percent of the Philippine export basket to the US only. Hence, it does not discount the fact that majority of the Philippine-US trade is intra-industry in nature as (70% of Philippine exports to US are intermediates); on the other hand, the second concern which goes against the standard theory, can be explained by two possible reasons. One possible explanation is that commodities which the Philippines lack comparative advantage and, yet, has high PH-US IIT, are highly specialized products which are destined primarily for the US market. Another possible reason would point to aggregation issues. This study uses the 6-digit aggregation A finer disaggregation, such as 8-digit or 10-digit, will probably show a different RCA.

The second part evaluates the cost to the Philippines of not joining the TPP. To carry out this analysis, the paper treats TPP as a pool of FTAs between the US and the other TPP members (i.e., US-Australia, US-Canada, US-Chile, US-Japan, US-Malaysia, etc.). If the TPP is interpreted simply as elimination of tariffs, because none of the TPP partners are eligible for GSP privileges in the US, trade re-orientation and trade diversion are most likely to occur at the expense of the Philippines. Hence, a TPP without the Philippines would open the possibility of substitution of suppliers to US in favor of the TPP members. Specific sectors in which trade re-orientation effects can occur include animal, transportation, miscellaneous, and machinery and electrical export sectors. Also, trade diversion effects will have a more dominant effect as compared to trade re-orientation. This is due to the fact that it can impact commodities which have a greater share in total Philippine exports.

Such preference erosion will have a significant impact to the Philippines depending on the similarity of the export baskets of the Philippines and the TPP members. Among the TPP members, Malaysia, Vietnam, Singapore, Mexico and Japan have the greatest similarity with the Philippines in terms of exports to the US at 6-digit commodity lines. The direct competitive pressure that the identified countries can exert to the Philippines depends on the comparative volume of their trade flows. It is found out that Mexico, Japan, Singapore, Canada, Malaysia and Vietnam will exert significant pressure to about 40 percent of the Philippine exports to the US.

Thus the findings from the Sussex framework indicate that the direct trade benefits (trade in goods) of greater market access of Philippine exporters to the US are quite limited. However, the effect of not joining the TPP by the Philippines may be more of a concern because of the competitive pressure that some of the TPP partners of the US may bring to bear on Philippine exports to the US. This angle, oftentimes set aside in debates, should be considered by policymakers.

Still, regardless of the limitations of the analysis, this research should complement studies that used other methods like the computable general equilibrium to look into the prospects presented by the TPP to the Philippines. In particular, the contribution of this paper lies in



identifying specific commodities that will benefit from Philippine participation or lose from non-participation in the TPP. Similar to what Cororaton and Orden (2014) did in their study, sectors that will be greatly affected were named for the benefit of industry players and policymakers.

Nonetheless, the limitations of the analysis should be emphasized. Firstly, the Sussex framework use trade in goods only. It is only a small aspect of the TPP agreement. Investments, services, trade facilitation and cooperation may be far more interesting and beneficial for the Philippines and US bilateral trade relations. Secondly, geopolitical issues are also not addressed by the framework. For one, the TPP may be an important agreement for the Philippines because US is its political partner. Thirdly, the interest to join a dynamic block is also not included in the analysis. A dynamic block such as the TPP offers a lot of investment and trade opportunities. The desire to join the fad can even supersede whatever benefits of the trade in goods. In sum, to the extent that tariffs are concerned, benefits of joining and the costs of not joining the TPP are limited. Such aforementioned limitations of the framework can be addressed in future studies. Hence decision of whether to join the TPP or not should weigh more in the non-tariff measures, and even more broadly, on the other chapters apart from trade in goods (services, investments, etc.).

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