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FTA utilization of Philippine imports

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DISCUSSION PAPER SERIES NO. 2020-25

FTA Utilization of Philippine Imports

*Francis Mark A. Quimba, Maureen Ane D. Rosellon,
and Sylwyn C. Calizo Jr.*



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FTA Utilization of Philippine Imports

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December 2020

Abstract

Free Trade Agreements (FTAs) are known to enhance trade through reduction or elimination of barriers, such as tariffs on imported goods. The difference between the preferential tariff rate under an FTA and the most-favored-nation (MFN) rate can be significant enough to encourage trade under an FTA. The Philippines has signed several FTAs and has enjoyed a reduction and even the elimination of tariffs on specific commodities. This research aims to understand the relationship between preferential margin and FTA utilization rates in the case of the Philippines. It uses an empirical model to estimate this relationship using an FTA import ratio as a variable for utilization and the difference between MFN and FTA tariff rates as a variable for margin. Findings suggest that the preferential margin is positively associated with the utilization rates for FTA agreements. Results are found to be relatively robust after controlling for different fixed effects variables. Among the Philippines' FTA partners, margin is revealed to be significant in increasing imports from its ASEAN neighbors. Furthermore, the study found a positive and significant relationship between margin and imports of nearly all commodity groups.

Keywords: *FTA utilization, Philippines, imports, FTA utilization rate, preferential margin, margin of preference*

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The views expressed herein do not necessarily represent those of the supporting institutions. All errors and omissions are solely the responsibility of the authors.

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List of Acronyms

| | |
|-------------|---|
| AANZFTA | ASEAN-Australia-New Zealand FTA |
| ACFTA | ASEAN-China FTA |
| ADB | Asian Development Bank |
| AFTA | ASEAN FTA |
| AHKFTA | ASEAN-Hong Kong, China FTA |
| AHTN | ASEAN Harmonized Tariff Nomenclature |
| AIFTA | ASEAN-India FTA |
| AJCEP | ASEAN-Japan Comprehensive Economic Partnership |
| AKFTA | ASEAN-Korea, Republic of, FTA |
| ASEAN | Association of Southeast Asian Nations |
| ATIGA | ASEAN Trade in Goods Agreement |
| COVID-19 | Coronavirus Disease 2019 |
| CPTPP | Comprehensive and Progressive Agreement for Trans-Pacific Partnership |
| DTI | Department of Trade and Industry |
| EU | European Union |
| FDI | Foreign Direct Investment |
| FOB | Free on Board |
| FTA | Free Trade Agreement |
| FTAAP | Free Trade Area of the Asia-Pacific |
| GDP | Gross Domestic Product |
| GSP | Generalized System of Preferences |
| GVC | Global Value Chain |
| HS | Harmonized System |
| IT | Information Technology |
| ITA | Information Technology Agreement |
| MFN | Most Favored Nation |
| MSME | Micro, Small, and Medium Enterprise |
| NTM | Non-Tariff Measure |
| PH-EFTA FTA | Philippines-European Free Trade Association FTA |
| PJEPA | Philippines-Japan Economic Partnership Agreement |
| PSA | Philippine Statistics Authority |

| | |
|--------|--|
| RCA | Revealed Comparative Advantage |
| RCEP | Regional Comprehensive Economic Partnership |
| ROO | Rules of Origin |
| SME | Small and Medium Enterprise |
| TRAINS | Trade Analysis Information System |
| UNCTAD | United Nations Conference on Trade and Development |
| US | United States |
| WITS | World Integrated Trade Solutions |
| WTO | World Trade Organization |

FTA utilization of Philippine imports

Francis Mark A. Quimba, Maureen Ane D. Rosellon, and Sylwyn C. Calizo Jr.¹

1. Introduction

Free Trade Agreements (FTAs) provide a means to reduce barriers in the cross-border flow of goods, services, as well as capital. Over the past decades, several bilateral and multilateral trade agreements have been enforced, creating what has been described as the *noodle bowl* or *spaghetti bowl* effect (Kang 2015). The Philippines alone is implementing nine FTAs, both bilaterally and as a member of the Association of Southeast Asian Nations (ASEAN),² and is continuing discussions and negotiations with the European Union (EU), the United States (US), and with the ASEAN-Plus Six³ under the Regional Comprehensive Economic Partnership (RCEP).

The proliferation of FTAs indicates the continuing interest of economies to establish formal partnerships. On a global context, FTAs appear to have become the response of the World Trade Organization's (WTO) members to the failure of the Doha Development Agenda. The agenda of global free trade has somehow shifted to bilateral and regional trade agreements. In the last decade, the world saw the signing of regional pacts, such as the Pacific Alliance, and negotiations in the Pacific under the RCEP, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP, initially the TPP), and the Free Trade Area of the Asia-Pacific (FTAAP).

For the Philippines, FTAs are viewed as a means of creating a testing ground through which liberalization can be gradually undertaken and the vulnerable sectors are given the opportunity to undertake actions to mitigate the adverse impacts. The Philippines' experience in negotiating a bilateral agreement with Japan showed that bilateral agreements can provide the country with bargaining tools through which the country is able to advance its interest outside the multilateral set-up. Also, FTAs create an enabling environment for regional integration because it helps the region articulate its position in the multilateral WTO. Finally, the Philippines views trade agreements as a defensive mechanism that shields the country from adverse impacts that could arise from other trade agreements (Medalla et al. 2010).

At the micro-level, FTAs are expected to contribute to the establishment of globally competitive industry and service sectors by strengthening linkages with other countries. For instance, the Philippine Development Plan 2017-2022 (NEDA 2017) has identified strategies that could increase the utilization of Micro, Small, and Medium Enterprises (MSMEs) and domestic suppliers of existing trade agreements.

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² The Philippines is a party to seven ASEAN FTAs, namely: (1) ASEAN Free Trade Area (AFTA) / ASEAN Trade in Goods Agreement (ATIGA); (2) ASEAN-China FTA (ACFTA); (3) ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP); (4) ASEAN-Korea, Republic of (AKFTA); (5) ASEAN-Australia-New Zealand FTA (AANZFTA); (6) ASEAN-India FTA (AIFTA); (7) ASEAN-Hong Kong, China FTA (AHKFTA). The Philippines also has other non-ASEAN FTAs, namely: the Philippines-Japan Economic Partnership Agreement (PJEPA), and the Philippines-European Free Trade Association FTA (PH-EFTA FTA).

³ RCEP initially includes the ASEAN-Plus Six, which refers to Australia, China, Japan, New Zealand, South Korea, and India. However, India opted out of RCEP in November 2019 (Choudhury 2019).

1.1 Objectives of the study

Recent developments in the global economy indicate a rise in protectionism and inward-looking policies. These may hinder the pursuit of additional trade agreements for the country to expand market access. Therefore, the Philippines needs to maximize existing trade agreements while at the same time prepare to negotiate for new and non-traditional trade partners. Given this background, this research aims to understand the state of FTA utilization in the country. Furthermore, it aims to quantify the relationship of lower tariff rates as provided by FTA schemes with importation of goods eligible for lower tariff rates under a specific tariff scheme. This research would be able to provide information on which FTAs are successfully being utilized while which ones have to be reviewed further in order to increase utilization.

1.2 Significance of the study

This paper contributes to the literature on FTAs and its impact on the Philippine economy by providing the relationship between imports and the trade margin for all goods covered by all the existing FTAs of the country. Earlier studies on FTA utilization (Wignaraja et. al. 2010; Aldaba et al. 2015) have looked at a small sample of firms, which may have limited its validity nationwide. The literature review shows that this may be the first paper of its kind for the Philippines.

1.3 Limitations of the study

Studies conducted for other ASEAN countries do show that FTA utilization is not just a function of preference margins but also other factors, such as the cost of applying for preferential tariffs or the presence of Non-Tariff Measures (NTMS),⁴ among similar others. Limited resources prevent the estimation of a model that would incorporate these factors. To address the possible omitted variable bias that may result from the absence of these explanatory variables, this study has estimated a number of regression models with various fixed effects.

The rest of this paper is organized as follows: Chapter 2 presents a background on Philippine trade and will also include a discussion on the Philippines' FTA policy. Chapter 3 provides the methodology and data sources that will help answer the research question on the relationship between Philippine imports and FTAs. The estimation results will then be discussed in Chapter 4. Finally, the conclusion and policy recommendations are found in Chapter 5.

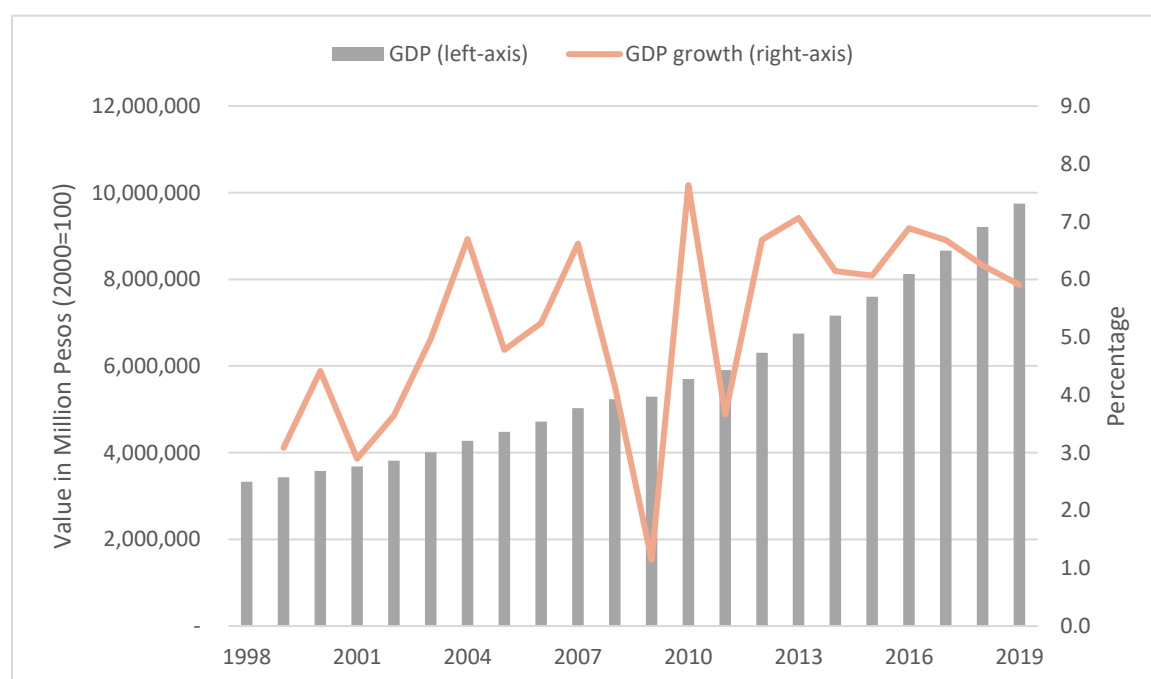
⁴ NTMs refer to policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded, prices, or both. In the Philippines, at least 854 NTMs are applied by different government agencies (Quimba and Calizo 2020).

2. Philippine Trade and FTA Policy

2.1 Background on Philippine Trade

The Philippines is recognized as one of the best performing and fastest growing economies in Asia because its growth has been robust, especially in the last decade. Annual Gross Domestic Product (GDP) growth rates ranged from 6.0-7.0 percent and averaged at 6.3 percent from 2010 to 2019 (Figure 1). International organizations, such as the World Bank (2019) and the Asian Development Bank (ADB 2019), have projected that the Philippine economy will grow at 6.0-6.2 percent in 2020 and 2021. However, the ADB has recalculated its growth forecasts amid the Coronavirus Disease 2019 (COVID-19) pandemic's economic impact. The ADB reports that the Philippines will experience a weaker growth of 2.0 percent in 2020 with the possibility of recovering to 6.5 percent in 2021 (ADB 2020).

Figure 1. Gross domestic product, 1998-2019

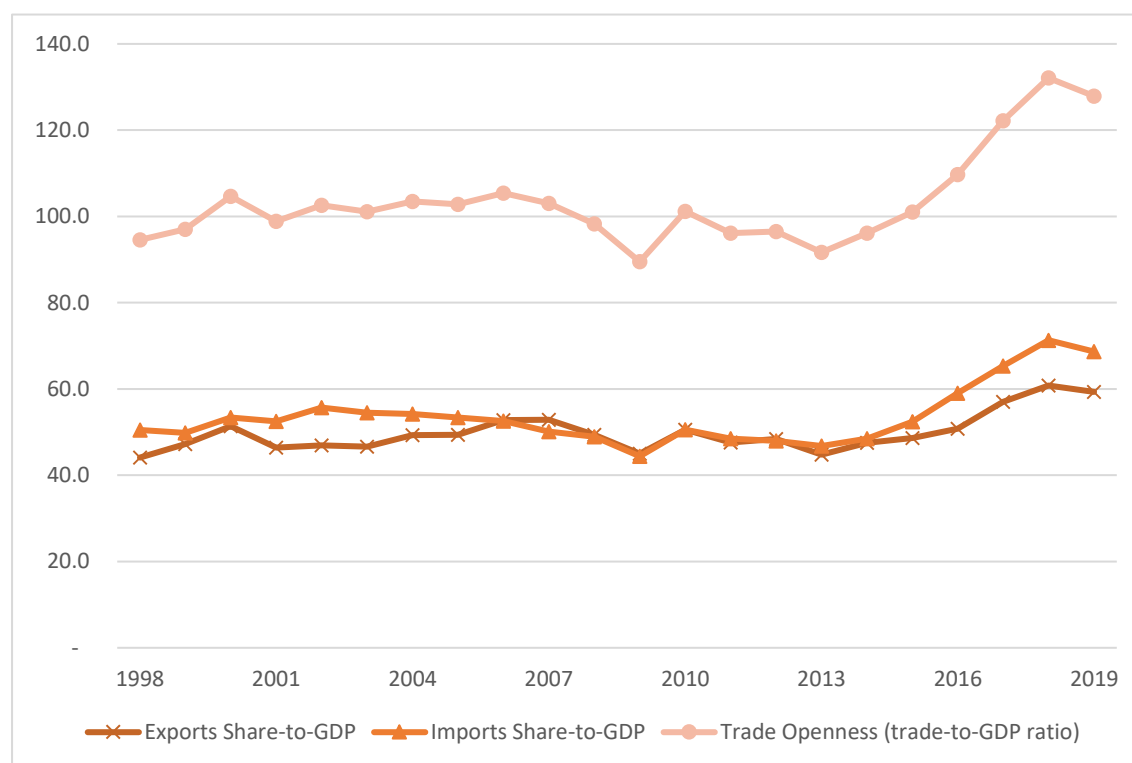


Source: Philippine Statistics Authority (PSA)

Contributing the most to GDP is the services sector, which continues to drive the Philippine economy. Meanwhile, the industry sector, which experienced a sluggish performance in the past decades, is picking up with the manufacturing sector gaining growth momentum. Agriculture sector growth has been slow in comparison (Rosellon and Medalla 2017).

On the aspect of trade, the Philippines is becoming increasingly open and engaging with other countries, especially in the last five years (Figure 2). Trade openness reached nearly 120.0 percent on average in 2015-2019. National accounts data for 1998-2019 also indicate that the imports share-to-GDP has been growing higher than the exports share in most years, which implies that the Philippines is a net importer of goods and services.

Figure 2. Trade-to-GDP ratios, 1998-2019



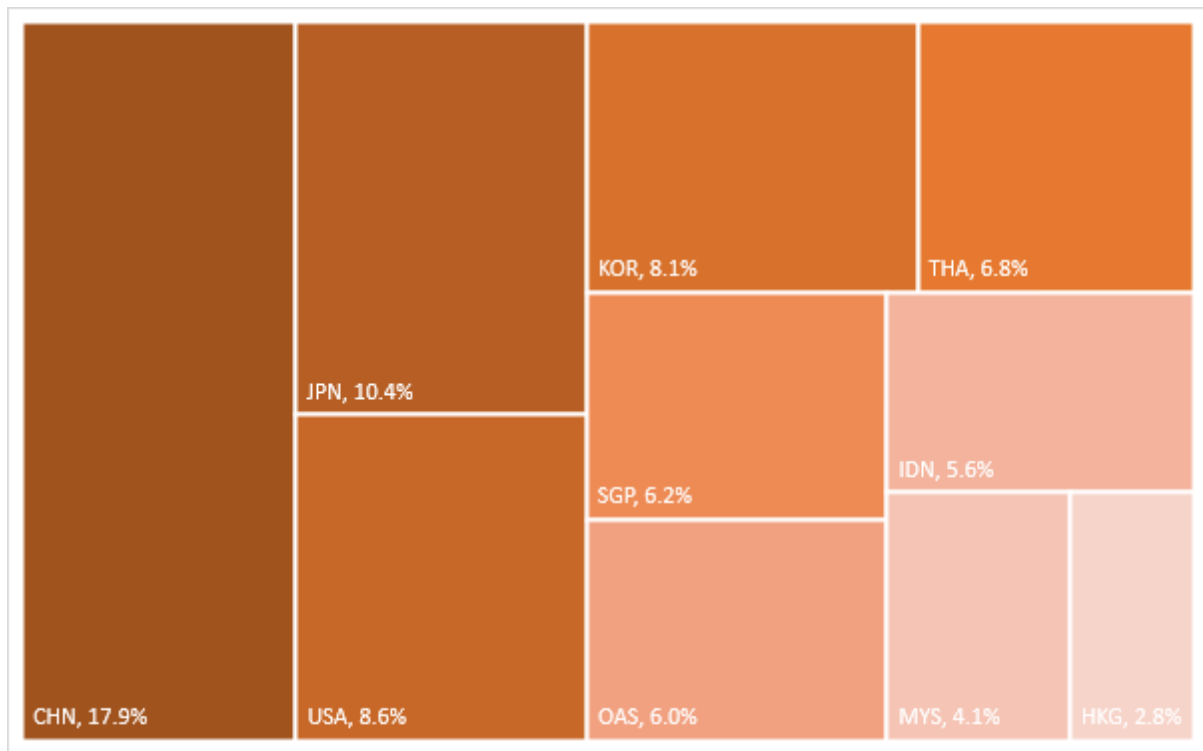
Source: National Accounts, PSA

Note: Exports and imports include both goods and services

East Asia is the Philippines' biggest market for goods. In the last five years (2014-2018), China, South Korea, Japan, and the other ASEAN-5 states⁵ were top sources of Philippine imports (Figure 3), while Japan, China, Hong Kong, South Korea, Singapore, and Thailand were top destinations of Philippine exports (Figure 4). Outside of Asia, the US was the topmost source of imports and destination of exports, while some EU countries, (Germany and the Netherlands) were included among the top 10 destinations of Philippine exports in the same period.

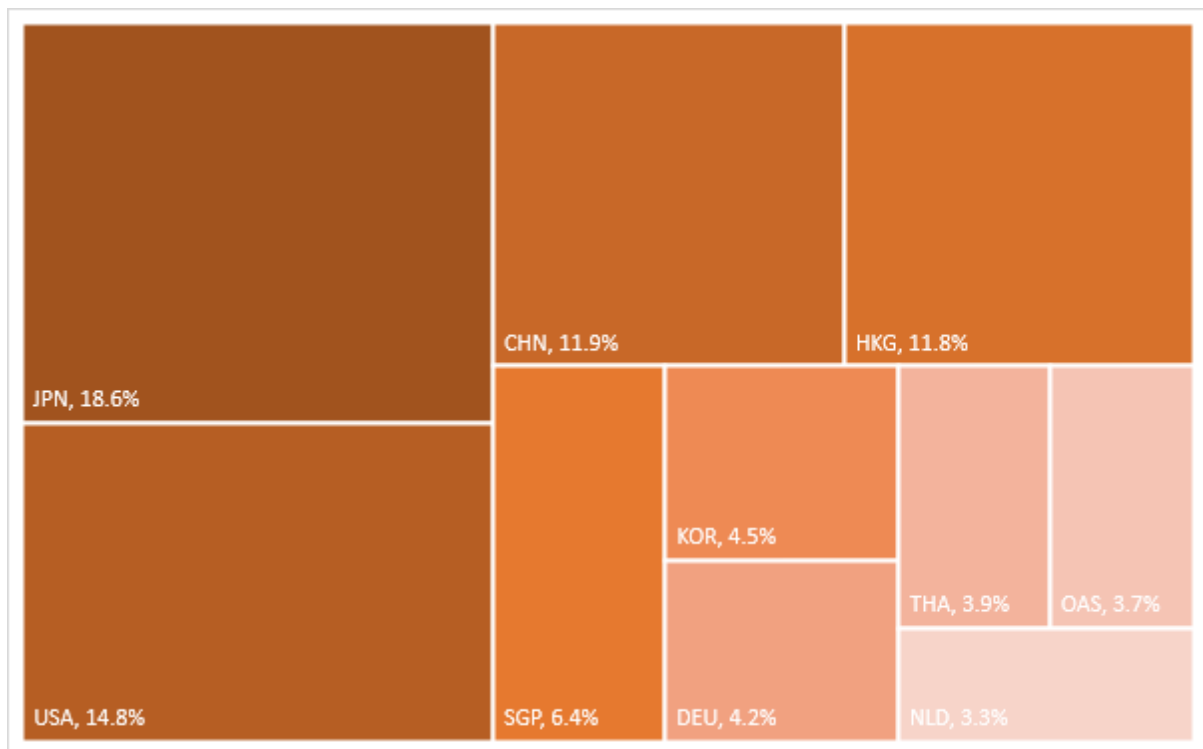
⁵ The ASEAN-5 refers to Indonesia, Malaysia, Singapore, Thailand, and the Philippines

Figure 3. Top 10 sources of Philippine imports, 2014-2018 (5-year average)



Source: Authors' calculation using data from World Integrated Trade Solution (WITS)

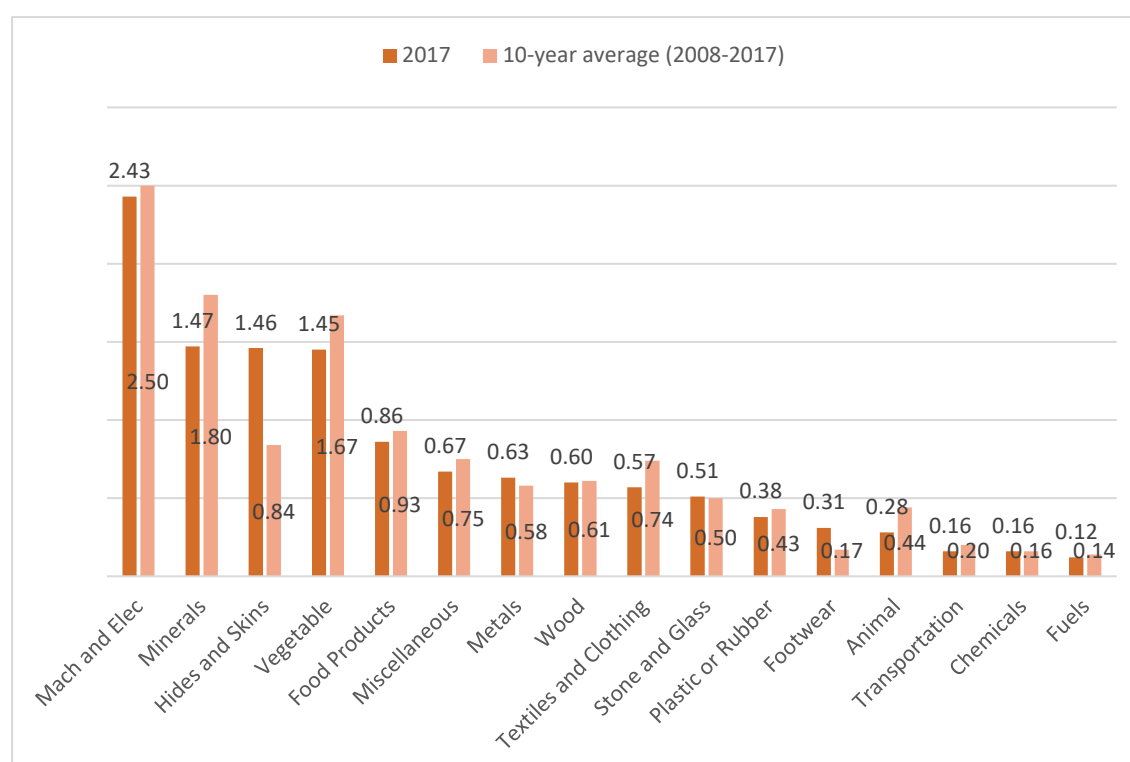
Figure 4. Top 10 destinations of Philippine exports, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

The Philippines maintains its comparative advantage in machinery and electric products. It has the highest revealed comparative advantage (RCA) among product groups in 2017 and in the last 10 years (2008-2017) (Figure 5). Minerals and vegetables come next with RCAs greater than 1.0 in the same period. Hides and skins is a new addition. While its 10-year RCA average is less than 1.0, its comparative advantage emerged in the last three years. The hides and skins category include travel goods, which has been enjoying preferential market access in the US through the Generalized System of Preferences (GSP). Lower tariffs may have prompted exporters to improve the quality and increase the production of travel goods⁶.

Figure 5. Philippines' revealed comparative advantage, 2008-2017



Source: WITS

2.2 Philippine FTA policy

2.2.1 Market access for goods, services, and investments

FTAs increase market access for goods, services, as well as investments. The reduction and elimination of tariff duties and facilitation under FTAs provide preferential access, benefiting businesses, especially MSMEs that are exporting or planning to export, and/or are importing raw materials, intermediate goods, and equipment. MSMEs are generally characterized to have limited resources, which can hinder their prospects for internationalization. High tariffs and costs associated with trade barriers have implication on costs, thus affecting the ability of MSMEs to participate in the international market, including through Global Value Chains

⁶ See Appendices for the top commodities imported and exported with FTA partner countries

(GVCs) (Rosellon and Medalla 2015; Francisco et al. 2018). Preferential market access lowers trade costs and ease import and export processes for businesses. These are important factors, especially for enterprises that are engaged or seeking participation in GVCs.

Moreover, the majority of FTAs have chapters on services and investments, which provide greater openness of the market in these sectors. FTAs open opportunities for service-oriented enterprises and professionals to move across borders, while investments are generally encouraged as they help stimulate economic activity in the country. This is especially true for developing countries, such as the Philippines. In FTAs, market access includes provisions to govern and protect international investment and businesses. Kreinin and Plummer (2012) explains that multinational enterprise would decide to invest in an FTA partner as it has preferential access to the market and it recognizes that FTAs will create greater dynamism in the business environment.⁷

2.2.2 Transfer of technology

Technology transfer can happen through trade in high-technology goods and services, and inflow of Foreign Direct Investments (FDIs) (Keller 2004; Kreinin and Plummer 2012; Maskus 2016). FDIs bring in not only capital but also technology and knowhow. This is one of the principal reasons why countries like the Philippines attract FDIs, for instance, through FTAs.

International transfer of technology can also occur through spillovers in the value chains. There is direct transfer through market transactions within and across enterprises, as well as technology leakage to other enterprises outside the chain (Maskus 2016; ESCAP 2018). Knowledge transfer can also happen in the movement of workers and professionals from one enterprise to another, and from one country to another. On this account, the movement of natural persons has become a significant part of the discussions in an FTA.

2.2.3 Trade performance and growth

FTAs are expected to boost trade as they are generally established between countries that are already trading partners and linked by production networks or supply chains. Moreover, as the market for businesses is bigger, there is the possibility of large-scale production and economies of scale from improved technical efficiency in production and distribution and spread costs (Kreinin and Plummer 2012). With a large customer base, businesses are able to produce bigger volumes and lower their costs and prices, thereby making them more competitive. The FTA market becomes dynamic with firms selling internationally in different countries, and with customers enjoying more variety of goods and services (Kreinin and Plummer 2012).

As for economic growth, studies do not appear to have a consensus on the significant impact of FTAs, except if confluent factors are taken into account. In a review of literature by Hur and Park (2012), a positive impact was shown if complementary domestic reforms are undertaken (e.g., ease of doing business, financial developments, labor market flexibility, and better rule of law, among similar others). Moreover, economic growth would also be possible if an FTA

⁷ Kreinin and Plummer (2012) calls this investment creation, while the decision to divert investment to the FTA market, even if there are cost-effective alternatives, is called investment diversion. Both are likened to trade creation and diversion effects, respectively.

is formed under conditions that technology transfer occurs between signatory parties and production efficiency is improved (Grossman and Helpman 1991; Feenstra 1996 as cited by Hur and Park 2012). It has become widely known that technology is one of the key drivers of productivity growth and competitiveness in the economy.

The Philippines' international trade policy is focused towards enhancing market access for goods, services, and investments, gaining access to/transfer of technology, generating investments and employment opportunities, and fostering benefits not only at the economic level but also at the socio-cultural level. The Philippines maintains interest in multilateral, regional, and bilateral levels of cooperation. It is a member of the WTO, which it considers as the best option for international trade relations. The country has also been enforcing FTAs bilaterally and regionally as a member of ASEAN, and is looking to accomplish trade agreements with other economies.

There are nine FTAs implemented by the Philippines (Table 1). The Philippines has been engaged in free trade within ASEAN since 2010 through AFTA. Moreover, as a member of ASEAN, the Philippines also enforces FTAs with China, Japan, South Korea, Australia and New Zealand, and India. ASEAN FTAs cover agreements in goods, services, and investments.

Table 1. FTAs of the Philippines

| FTA/RTA | Status |
|---|--|
| ASEAN Free Trade Area (AFTA)/ ASEAN Trade in Goods Agreement (ATIGA) | Signed in January 1992 / February 2009 Effective since January 1993 / May 2010 |
| ASEAN-China FTA (ACFTA) | Signed in November 2004 (Goods), January 2007 (Services) Effective since January 2005 (Goods), July 2007 (Services) |
| Philippines-Japan Economic Partnership Agreement (PJEPA) | Signed in September 2006 Effective since December 2008 |
| ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP) | Signed in March 2008 Effective since December 2008 |
| ASEAN-Australia-New Zealand FTA (AANZFTA) | Signed in February 2009 Effective since January 2010 |
| ASEAN-India FTA (AIFTA) | Signed in August 2009 (Goods), November 2015 (Services) Effective since January 2010 (Goods), July 2015 (Services) |
| ASEAN-Korea, Republic of FTA (AKFTA) | Signed in August 2006 (Goods), November 2008 (Services) Effective since October 2010 |
| Philippines-European Free Trade Association FTA (PH-EFTA FTA) | Signed in April 2016 Effective since June 2018 |
| ASEAN-Hong Kong, China FTA (AHKFTA) | Signed in November 2017 Effective since June 2019 |

Source: Regional Trade Agreements Database, WTO (accessed 3 July 2019); Department of Trade and Industry, Philippines; ASEAN; Tariff Commission

The Philippines' first bilateral trade agreement is with Japan, through PJEPA, which was enforced in December 2008 and is undergoing a general review after about a decade of

implementation. The other sole FTA of the Philippines is with the European Free Trade Association (i.e., Iceland, Liechtenstein, Norway, and Switzerland), which took effect in June 2018.

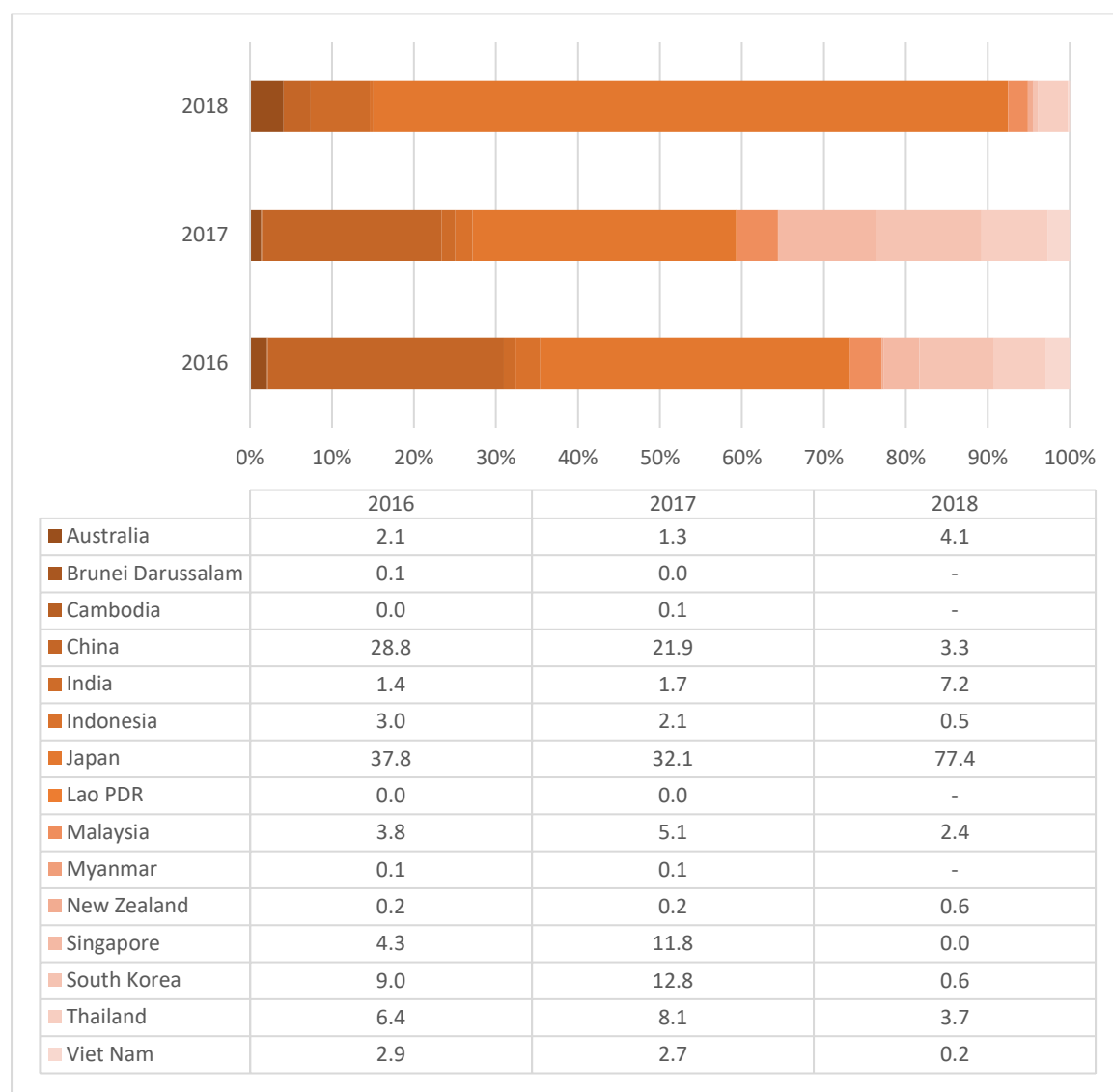
Based on reports from the Department of Trade and Industry (DTI 2019), around 49.0 percent of Philippine exports in 2018 go to its FTA partners with an additional 14.0 percent if Hong Kong, China is included (the Philippines is yet to implement AHKFTA). Non-FTA partners, particularly the US and the EU, offer preferential tariffs to the Philippines through the GSP scheme, and have been major export destinations (around 16.0% and 13.0%, respectively, in 2018).

The Philippines also aims to strengthen its engagement with non-FTA, key trading partners. For instance, it is seeking to sustain the preferential tariff privileges from the US and the EU through the establishment of an FTA with each economy. Two rounds of negotiations have been held under the FTA talks with the EU, while discussions on an FTA with the US has not yet commenced. The Philippines has also signed an “early achievement package” of the negotiations for an FTA with South Korea (Ranada 2019), and has established a joint economic committee with Chile as an initial step towards an FTA. As for the mega-regional trade deals, the CPTPP is still under study, while under the FTAAP framework, the Philippines remains active and is leading together with Malaysia the work program on MSMEs.

Further, ASEAN aims to establish more FTAs. It has started discussions with Canada and the EU. Furthermore, RCEP has made significant progress in negotiations and is targeted to be signed by 2020. In late 2019, however, India announced its withdrawal from RCEP (Choudhury 2019), thereby leaving questions as to how it will affect the conclusion of negotiations and signing of the trade agreement.

According to DTI (2019), nearly half of the exports of the Philippines went to its FTA partners in 2018. Looking at specific economies, in particular, data from 2016 to 2018 indicates that Japan received the majority of FTA exports of the Philippines (77.4% in 2018, Figure 6), while China, Singapore and South Korea are the next top destinations though there was a declining trend over this period. Meanwhile, FTA exports to India have increased.

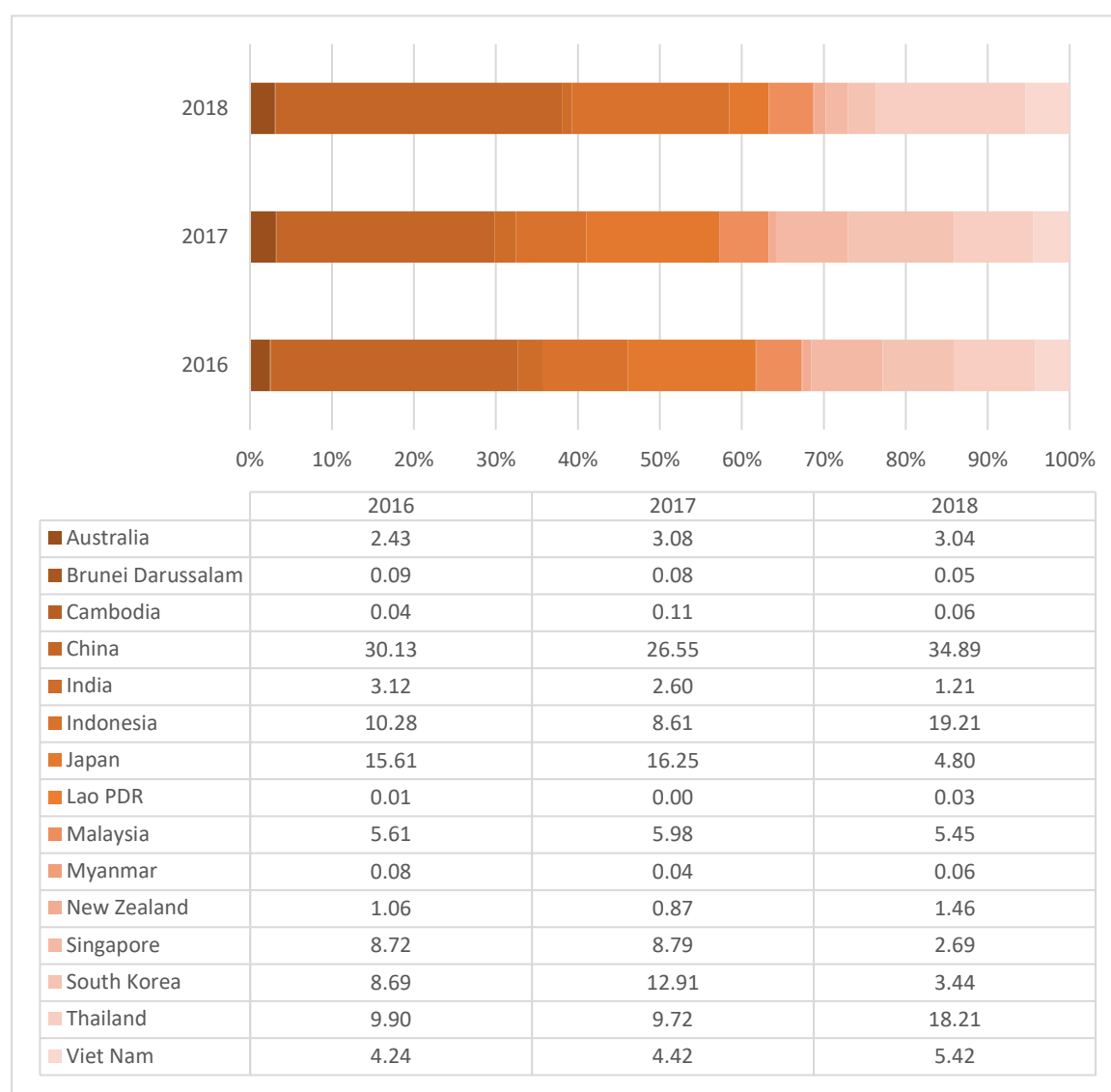
Figure 6. Share of economies in exports under Philippines FTAs



Source: PSA

The majority of imports with trading partners were sourced from China during the period 2016-2018 (35.0% in 2018, Figure 7). Other top FTA suppliers are Indonesia and Thailand. Other significant sources of imports are Singapore, South Korea, and Japan, but their share in overall imports to FTA partners declined.

Figure 7. Share of economies in imports under Philippine FTAs



Source: PSA

2.2.4 Impact on industry (firm-level)

While the trade data previously discussed indicate how the market has expanded for the local industry, there are also other indicators of FTA utilization that have been studied and measured at the firm-level, for instance, the utilization of preferential tariffs in exporting to or importing from an FTA partner. Earlier studies that used firm surveys suggested that FTA utilization in the Philippines has been relatively low. For instance, the study by Hiratsuka et al. (2009), which looks into AFTA, found that from a survey of Japanese-affiliated firms in ASEAN, the Philippines, together with Viet Nam, had the lowest utilization. Their survey results indicate that, in 2008, 11.8 percent of surveyed exporter firms and 8.0 percent of importer firms in the Philippines used AFTA while Viet Nam is at 9.4% and 12.5%, respectively.

Over the years, firm surveys and studies were conducted in the Philippines by different authors (Wignaraja et al. 2010; Aldaba et al. 2014) using different sample firms and covering different

FTAs, but the results still suggested low FTA usage by establishments. The study by Wignaraja et al. (2010), which used a survey of 155 firms from the transport, electronics, and food sectors in the Philippines revealed that 20.0 percent of firms used AFTA. Most of the user-firms were from the transport sector. Another survey done by Aldaba et al. (2014) showed that 30.6 percent of 108 manufacturing firms are FTA users. Moreover, a higher concentration of FTA users was found among medium- and large-sized firms, and those with foreign equity.

In 2015, the DTI commissioned a survey of 939 manufacturing establishments using the manufacturing survey on business FTA participation (DTI 2015). Their findings suggested that 22.0 percent of all survey respondents were FTA users. A closer inspection further showed that 16.0 percent of SMEs and 39.0 percent of large firms utilized FTAs. It was also found that the AFTA/ATIGA was the most used FTAs among respondents, followed by the ACFTA and AJEPA.

3. Methodology

3.1 Data and sources

The trade data comes from the Philippine Statistics Authority (PSA) that collects data on total imports of all goods as identified by its product code under the Harmonized Commodity Description and Coding System (HS)⁸ and the FTA scheme.⁹ The dataset used for this study is from 2016 to 2018. Further, this dataset includes values of the goods being imported (Free on Board [FOB], insurance, and freight).

The Trade Analysis Information System (TRAINS), managed by the United Nations Conference on Trade and Development (UNCTAD) through the World Integrated Trade Solution (WITS), reports the tariff rate for each of the goods following a certain nomenclature for a given year. Merging of the two datasets allows linking of the preference margin and FTA utilization.

Exploration of the data reveals that AIFTA has the least number of tariff lines that is subjected to zero tariff rates while AFTA would have almost all percent tariff lines with zero tariffs by 2017 (Table 2). Further, both PJEPA and AANZFTA have above 95.0 percent product liberalization by 2018. It is interesting to note that in 2016 and 2017, both ACFTA and AKFTA have about 88.0 percent and 90.0 percent of total tariff lines, respectively, already under zero tariffs. However, this proportion decreased in 2018 to 84.7 percent and 86.9 percent, respectively.

⁸ The Harmonized System is an international nomenclature for the classification of products introduced in 1988. For more on this system, see: <https://unstats.un.org/unsd/tradekb/Knowledgebase/50018/Harmonized-Commodity-Description-and-Coding-Systems-HS>

⁹ This dataset includes other schemes under which goods may be imported, such as the Agriculture and Fisheries Modernization Act, Executive Order 70, series of 2012, and the ASEAN Industrial Joint Venture. These are applicable to various goods from other countries and are excluded in this study as these have not been defined in the trade agreement.

Table 2. Share of tariff lines with zero tariff rates to total tariff lines by FTA

| | 2016 | 2017 | 2018 |
|---------|-------|-------|-------|
| AANZFTA | 95.75 | 95.78 | 95.22 |
| ACFTA | 88.28 | 88.28 | 84.71 |
| AFTA | 5.13 | 99.23 | 99.30 |
| AIFTA | 5.05 | 5.04 | 12.96 |
| AJCEP | 70.78 | 72.43 | 91.92 |
| AKFTA | 90.15 | 90.01 | 86.91 |
| PJEPA | 74.34 | 75.86 | 95.01 |

Source: Authors' calculations using data from PSA

Note: Calculated for imports where the Most Favored Nation (MFN) tariff is greater than the tariff under the trade agreement

Table 2 reveals that while there is already a significant number of products (tariff lines) subjected to zero tariff rates under the different FTA schemes of the country, there is still room for more product lines that can be subjected to lower tariff rates. Moreover, there is opportunity for increasing the share of imports from partner countries utilizing these FTAs as shown by Table 3. An overall ratio of 44.6 percent of imports from FTA partner countries has utilized FTA rates in 2018, with imports from New Zealand, Brunei Darussalam and China having the highest proportion. What is alarming is that the share of imports under FTA tariff rates is lowest in Singapore and Japan, despite the existence of a bilateral agreement with Japan.

Table 3. Share of imports under FTAs to total imports by FTA partner

| | 2016 | 2017 | 2018 |
|--------------------|-------|-------|-------|
| Australia | 75.17 | 51.13 | 54.12 |
| Brunei Darussalam | - | 30.22 | 69.27 |
| Cambodia | - | 34.44 | 21.68 |
| China | 71.04 | 62.97 | 62.72 |
| Indonesia | - | 34.63 | 41.45 |
| India | 32.41 | 36.46 | 34.95 |
| Japan | 11.94 | 11.60 | 9.47 |
| Korea, Republic of | 36.41 | 32.42 | 31.21 |
| Lao PDR | - | 95.23 | 37.27 |
| Myanmar | - | 27.29 | 31.14 |
| Malaysia | - | 21.40 | 18.94 |
| New Zealand | 86.81 | 85.60 | 81.41 |
| Singapore | - | 6.84 | 6.11 |
| Thailand | - | 38.76 | 36.38 |
| Viet Nam | - | 23.61 | 22.98 |

Source: Authors' calculations using data from PSA

Note: Calculated for imports where the MFN tariff is greater than the tariff under the trade agreement

In terms of FTA utilization rate¹⁰, Table 4 shows that most of the imports from ASEAN countries utilize AFTA despite having other options in the other ASEAN+1 trade agreements. Table 4 reveals for instance that there are some imports from Singapore and Viet Nam that used ACFTA. In 2018, AFTA is the most used FTA for imports from the two countries, but 0.1 percent of imports from Singapore and 0.2 percent of imports from Viet Nam used ACFTA tariff rates. In the same vein, imports from Japan may utilize two preferential rates, i.e. under AJCEP and PJEPA, but PJEPA appears to be more preferred as revealed by the 16.6 percent utilization rate.

¹⁰ Utilization refers to the ratio of imports under an FTA to total trade of products eligible under the FTA

Table 4. Utilization rate of FTAs by FTA partner in 2018, in percent

| | AANZFTA | ACFTA | AFTA | AIFTA | AJCEP | AKFTA | PJEPA | MFN |
|--------------------|---------|-------|------|-------|-------|-------|-------|------|
| Australia | 54.1 | - | - | - | - | - | - | 45.9 |
| Brunei Darussalam | - | - | 92.2 | - | - | - | - | 7.8 |
| Cambodia | - | - | 59.0 | - | - | - | - | 41.0 |
| China | - | 62.7 | - | - | - | - | - | 37.3 |
| Indonesia | - | - | 79.3 | - | - | - | - | 20.7 |
| India | - | - | - | 35.0 | - | - | - | 65.0 |
| Japan | - | - | - | - | 0.7 | - | 16.6 | 82.7 |
| Korea, Republic of | - | - | - | - | - | 31.2 | - | 68.8 |
| Lao PDR | - | - | 74.9 | - | - | - | - | 25.1 |
| Myanmar | - | - | 66.6 | - | - | - | - | 33.4 |
| Malaysia | - | - | 55.5 | - | - | 0.0 | - | 44.5 |
| New Zealand | 81.4 | - | - | - | - | - | - | 18.6 |
| Singapore | - | 0.1 | 25.6 | - | 0.0 | - | - | 74.3 |
| Thailand | - | - | 73.4 | - | - | - | - | 26.6 |
| Viet Nam | 0.2 | 0.2 | 60.3 | - | - | - | - | 39.2 |

Source: Authors' calculations using data from PSA

Note: Calculated for imports where the MFN tariff is greater than the tariff under the trade agreement

3.2 Econometric model

The model used in this study is closely similar to Keck and Lendle (2012) and Hayakawa and Laksanapanyakul (n.d.) which relates utilization rate to preferential margin. It is hypothesized that the importation of goods will increase as the difference between the tariff under the FTA and the tariff under MFN increases. To test this assumption, this paper estimates the empirical model specified as:

$$U_{ipst} = \alpha \cdot MARGIN_{pst} + u_{ip} + u_{pt} + \epsilon_{ipst} \quad (1)$$

where, U is defined as the utilization ratio of product i imported from partner country p under the trade agreement scheme s for the given year t . Utilization refers to the ratio of imports under an FTA ($imports_{ipst}$) to total trade of products eligible under the FTA ($imports_{ipt}$). It is calculated using the formula: $\frac{imports_{ipst}}{imports_{ipt}}$;

$MARGIN_{pst}$ is the difference between the MFN tariff and the tariff rate under the trade agreement;

u_{ip} is the fixed effects for product (HS-code) and partner country (exporter);

u_{pt} is the fixed effects for partner country (exporter) and year; and,

ϵ_{ipst} is the error term.

An extension of the empirical model is also estimated, which includes additional product-year fixed effects (u_{pt}) to control for product-scheme invariant variables.

4. Results and Discussion

4.1 Baseline model

The results of the baseline model are presented in Table 5. Model 1 shows that without controlling for omitted variable bias, the margin is positively associated with the utilization rates for FTA agreements. The result is higher after controlling for omitted variables and including fixed effects as shown in Models 2 to 5. Model 2 includes partner country-commodity fixed effects to control for omitted variables such as level of productivity distributed across all the commodities exported by the partner country or elasticity of substitution between imports and domestic goods. In addition, Model 2 also includes partner country-year fixed effects which controls for exchange rates in the partner country.

Model 3 adds commodity-year fixed effects to model 2 which controls for the domestic demand for these commodities. Model 4 combines the commodity-year fixed effects with country-commodity-scheme fixed effects while model 5 includes the country-scheme-year fixed effects. Finally, Model 6 has three fixed effects: commodity-year, country-commodity-scheme and country-scheme-year.

Table 5. Baseline model results

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------------|----------|-----------|----------|----------|----------|----------|
| MARGIN | 0.358*** | 0.852*** | 0.809*** | 0.395*** | 0.420*** | 0.162 |
| | (0.0079) | (0.01187) | (0.0179) | (0.1458) | (0.0257) | (0.1605) |
| Country-HS FE | No | Yes | Yes | No | No | No |
| Country-Year FE | No | Yes | Yes | No | No | No |
| HS-Year FE | No | No | Yes | Yes | Yes | Yes |
| Country-HS-Scheme FE | No | No | No | Yes | No | Yes |
| Country-scheme-year FE | No | No | No | No | Yes | Yes |
| Number of observations | 283,115 | 275,898 | 274,077 | 224,704 | 281,332 | 224,696 |
| Within R-squared | 0.0072 | 0.0091 | 0.009 | 0.000 | 0.009 | 0.000 |

Source: Authors' calculations using data from PSA and WITS

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

From among the models presented in Table 5, only Model 6 shows no relationship between margin and utilization rate after controlling for commodity-year fixed effects, country-commodity-scheme fixed effects, and country-scheme-year fixed effects.

4.2 Extensions to the baseline model

Table 6 presents the extensions to the baseline model, which include incorporating a cubic function of margin (1) and a quadratic function (2). The results of the higher-order regression estimates indicate that there is a non-linear relationship between margin and utilization. Model 2 shows that there is a positive and increasing relationship between margin and utilization while Model 1 shows that this relationship is only true at around margin levels of about 0.3 (see Appendix 1). Models 3 and 4 somehow support the relationship obtained from Models 1 and 2 by showing that the relationship varies across different values of margin.

Table 6. Results using higher-order margin variable and categories of margin

| | (1) | (2) | (3) | (4) |
|----------------------------|-----------|----------|------------|-------------|
| MARGIN | 0.358*** | 0.666*** | | |
| | (0.0079) | (0.0383) | | |
| MARGIN squared | -1.806*** | 0.636*** | | |
| | (0.467) | (0.1502) | | |
| MARGIN cubed | 4.359*** | | | |
| | (0.790) | | | |
| margin<0.01 | | | -4.0279*** | |
| | | | (1.352) | |
| margin>=0.01 & margin<0.03 | | | | 0.005032 |
| | | | | (0.1501) |
| margin>=0.03 & margin<0.05 | | | | 0.49786*** |
| | | | | (0.0819) |
| margin>=0.05 & margin<0.1 | | | | 0.619936*** |
| | | | | (0.0436) |
| margin>=0.1 | | | | 0.71874*** |
| | | | | (0.0250) |
| Country-HS FE | Yes | Yes | Yes | Yes |
| Country-Year FE | Yes | Yes | Yes | Yes |
| HS-Year FE | Yes | Yes | Yes | Yes |
| Number of observations | 274,077 | 274,077 | 274,077 | 274,077 |
| Within R-squared | 0.0092 | 0.0091 | 0.0001 | 0.0091 |

Source: Authors' calculations using data from PSA and WITS

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

The results do show that the margin is positively associated with the increase in FTA utilization. To further analyze the relationship between margin and FTA utilization, interaction terms with margin and dummy variables for country and commodity group (section of the ASEAN Harmonized Tariff Nomenclature, AHTN) were estimated.

Table 7 presents the results of the regression with country dummies interacted with margin. The results reveal that margin is significant in increasing the imports of the Philippines from most of its ASEAN neighbors (i.e., Indonesia, Cambodia, Myanmar, Malaysia, Singapore, Thailand, and Viet Nam). In addition, the relationship is also positive and significant for Japan, which is the only country the Philippines has a bilateral trade agreement with.

Table 7. Regression results with country dummies interacted with margin

| Variables | (1) |
|------------------------|-------------|
| AUS | -7.65525** |
| | (3.011849) |
| BRN | 0.00288 |
| | (0.311053) |
| CHN | -8.7366 |
| | (10.64771) |
| IDN | 1.369049*** |
| | (0.044972) |
| IND | -1.47553 |
| | (0.992245) |
| JPN | 1.368988*** |
| | (0.247142) |
| KHM | 0.761149*** |
| | (0.120828) |
| KOR | 0 |
| | (omitted) |
| LAO | 1.62E-13 |
| | (0.805298) |
| MMR | 1.228597*** |
| | (0.197673) |
| MYS | 0.780549*** |
| | (0.039936) |
| NZL | 1.777843 |
| | (3.611732) |
| SGP | 0.170349*** |
| | (0.035123) |
| THA | 1.054626*** |
| | (0.039193) |
| VNM | 1.028678*** |
| | (0.047842) |
| Country-HS FE | Yes |
| Country-Year FE | Yes |
| HS-Year FE | Yes |
| Number of observations | 274,077 |
| Within R-squared | 0.0116 |

Source: Authors' calculations using data from PSA and WITS

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

Table 8 presents the results of the interaction term of dummy variables corresponding to the AHTN sections for each of the product codes in the dataset. The results show how margin affects utilization for certain types of goods. It can be noted that the relationship is positive and significant for almost all of the explanatory variables despite controlling for a number of fixed

effects. Vegetable products; animal or vegetable fats and oils, etc.; prepared foodstuffs, etc.; mineral products; products of the chemical or allied industries; woods and articles of wood; articles of stone; are the AHTN sections that have a coefficient greater than 1.0, which implies the increase in the utilization rate would be higher for the commodities in these sections.

Table 8. Regression results with commodity groups (AHTN sections) interacted with margin

| Variables | (1) |
|---|-------------|
| Live animals; animal products | 0.713414*** |
| | (0.250735) |
| Vegetable products | 1.042667*** |
| | (0.094507) |
| Animal or vegetable fats and oils etc. | 2.796492*** |
| | (0.235983) |
| Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes | 1.653018*** |
| | (0.073453) |
| Mineral products | 2.451874*** |
| | (0.684969) |
| Products of the chemical or allied industries | 1.688353*** |
| | (0.109807) |
| Plastics and articles thereof; rubber and articles thereof | 0.857822*** |
| | (0.044282) |
| Raw hides and skins, leather, furskins and articles thereof; etc. | 0.262266** |
| | (0.114436) |
| Wood and articles of wood | 1.028926*** |
| | (0.165811) |
| Pulp of wood or of other fibrous cellulosic material | 0.774444*** |
| | (0.106618) |
| Textiles and textile articles | 0.500592*** |
| | (0.037783) |
| Footwear; headgear, umbrellas | 0.977423*** |
| | (0.115873) |
| Articles of stone | 1.077069*** |
| | (0.094996) |
| Natural or cultured pearls | 0.359853 |
| | (0.336488) |
| Base metals and articles of base metal | 0.534272*** |
| | (0.055591) |
| Machinery and mechanical appliances | 0.792755*** |
| | (0.058667) |
| Vehicles, aircraft vessels and associated transport equipment | 0.767464*** |
| | (0.053916) |
| Optical, photographic, cinematographic, measuring, checking precision etc. | 0.45053 |
| | (0.305785) |
| Arms and ammunition | 0.003835 |

| | |
|---|-------------|
| | (0.51034) |
| Miscellaneous manufactured articles | 0.911015*** |
| | (0.08995) |
| Works of art; collectors' pieces and antiques | 0.379146 |
| | (1.235513) |
| Country-HS FE | Yes |
| Country-Year FE | Yes |
| HS-Year FE | Yes |
| Number of observations | 274,077 |
| Within R-squared | 0.0109 |

Source: Authors' calculations using data from PSA and WITS

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

5. Conclusion and Policy Recommendations

5.1 Conclusion

This study examined the relationship between preferential margin and FTA utilization rates in the Philippines. Margin is defined in this study as the difference between the MFN tariff and the tariff rate under a trade agreement, and utilization refers to the ratio of imports under an FTA to total trade of products eligible under the FTA. The results of the regression and the analysis show that the tariff margin of the trade agreements is significantly associated with an increase in FTA utilization. The result is relatively robust after controlling for a number of factors. The result is also true under other specifications.

The results of the regression reveal that preferential margins are significant in increasing imports from key partner countries. The results of the regression with interaction term for the commodities show that the margins are significant in increasing the imports of almost all product groups. This is a very important result as most of the industries in the Philippines are reliant on imports for raw materials.

Findings of the study suggest that preferential or reduced tariff rates encourage importation under an FTA. Based on this relationship, it would be expected that FTA utilization in the Philippines would be on a favorable level, having signed nine FTAs. However, utilization rate with some of the FTA partners appeared to be unexpectedly low, for instance, Japan and Singapore. This finding can possibly be attributed to a few key factors which studies have identified to affect the use of FTAs in the Philippines. These factors include lack of information or knowledge about FTAs, procedural delays, administrative and compliance costs (e.g., non-tariff measures and rules of origin), and availability of other incentives schemes¹¹ (Wignaraja et al. 2010; Aldaba et al. 2015; DTI 2015).

To encourage FTA use, previous studies have recommended to strengthen the promotional campaigns on the use of FTAs; to upgrade and streamline the documentation and certification

¹¹ Examples are export-processing zones that grant duty- and tax-free importation of raw materials, parts, supplies, and capital equipment, and there are agreements, such as the WTO's Information Technology Agreement (ITA) wherein trade is duty-free.

systems to simplify and speed up the process; to pursue harmonization of procedures and rules such as the Rules of Origin (ROO) on a regional level; and to establish other mechanisms that will support businesses and will better mainstream FTAs into the Philippine trade policy (Wignaraja et al. 2010; Aldaba et al. 2015). This study presents additional recommendations to improve FTA utilization based on the findings.

5.2 Policy recommendations

While the results of the FTA utilization rate under AFTA is promising, utilization rate of PJEPA is alarmingly low at 16.6 percent. Being the first bilateral trade agreement of the country, it is important that this trade agreement is maximized to pave the way for negotiations of subsequent trade agreements. Thus, government should ensure that importers have all the available information related to importation under PJEPA and all the other FTAs. Particular attention should be given to micro, small and medium-sized importers and those located in rural areas. Understanding that the resources of the government may be limited preventing a wider reach, it is recommended that government agencies partner with business groups and organize information sessions and workshops to specifically increase the capacity of importers to utilize FTAs.

As the regression results show a positive relationship between margin and utilization rate, it is recommended that the government revisit existing FTA agreements to pursue further tariff reduction in goods that still have room for tariff reduction. The results of this paper also support accelerated tariff reduction in the negotiation of subsequent trade agreements.

The results of this study also show that AFTA and AANZFTA tend to have higher utilization rates for some of the Philippines' import partners. It is important the Philippines use these two agreements as a benchmark for further trade agreement negotiation. If possible, it may be wise to compare PJEPA with these two agreements to identify strategies to improve the utilization of PJEPA by addressing the limitations of the agreement itself.

Findings also suggest the importance of continuous monitoring of the utilization of trade agreements. This paper was only able to obtain these results because of a specialized dataset provided by the PSA. The data is available for only three years which prevents a long-term evaluation. It is recommended that the government agencies continuously work with the PSA and the Tariff Commission to process the importation data vis-à-vis tariff data and monitor the utilization rate of the FTAs. This indicator should be closely monitored as it is the first indicator measuring the benefit from FTAs.

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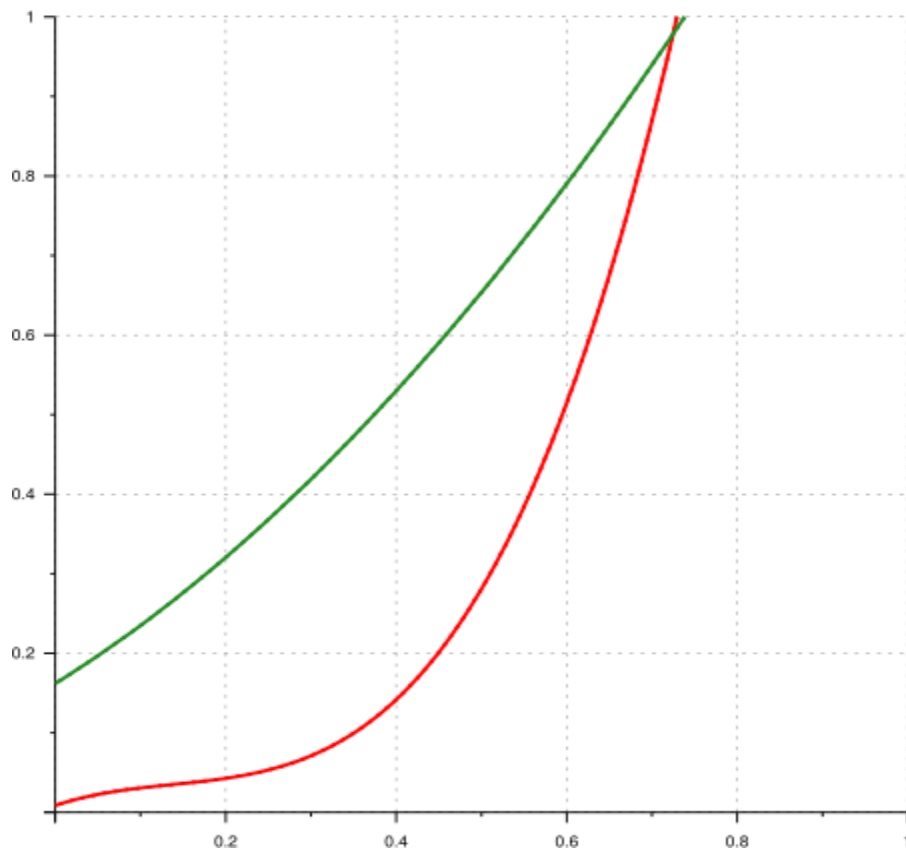
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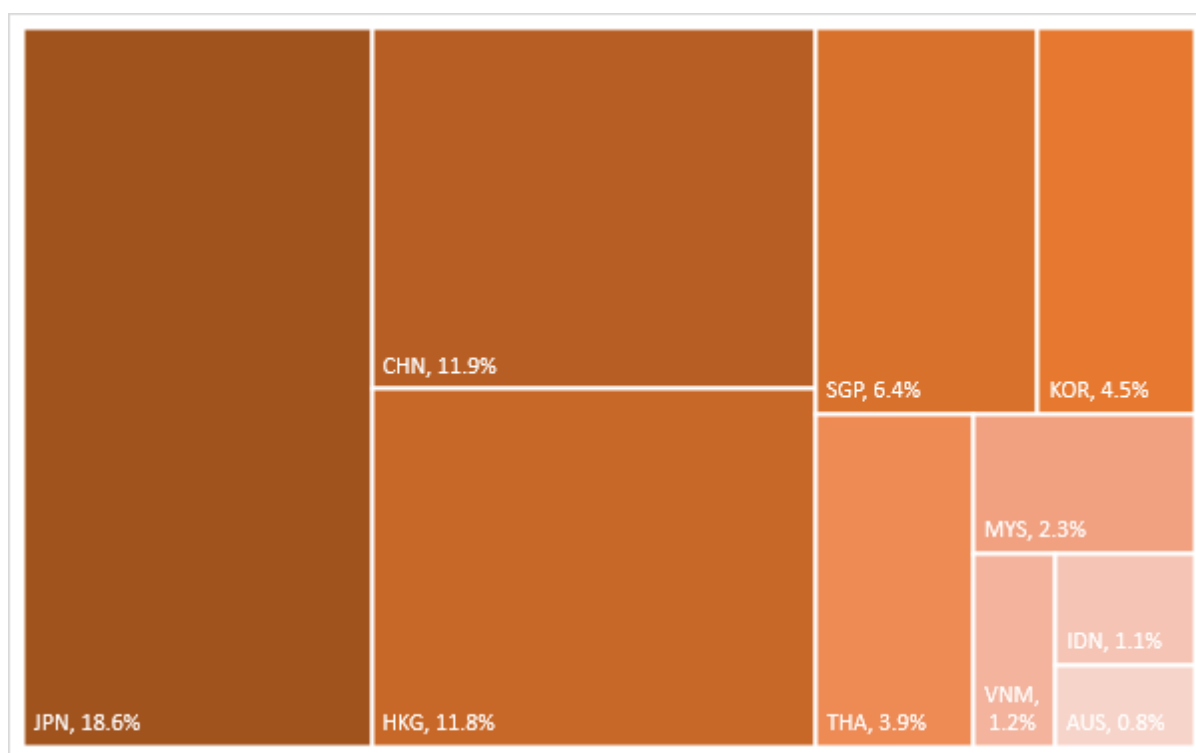
Appendix

Appendix 1 Relationship between utilization and margin



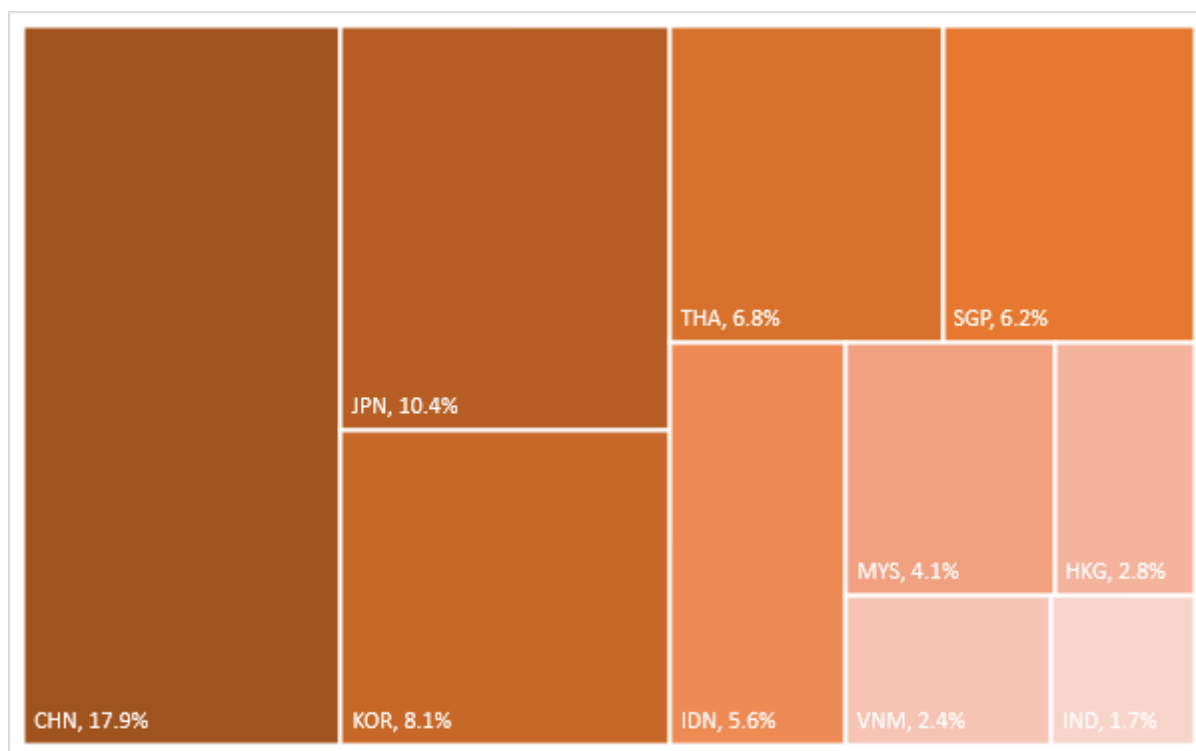
Software source: Quick Math (<http://www.quickmath.com/>)

Appendix 2 Top 10 Philippine export destinations with an FTA to the Philippines, 2014-2018 (5-year average)



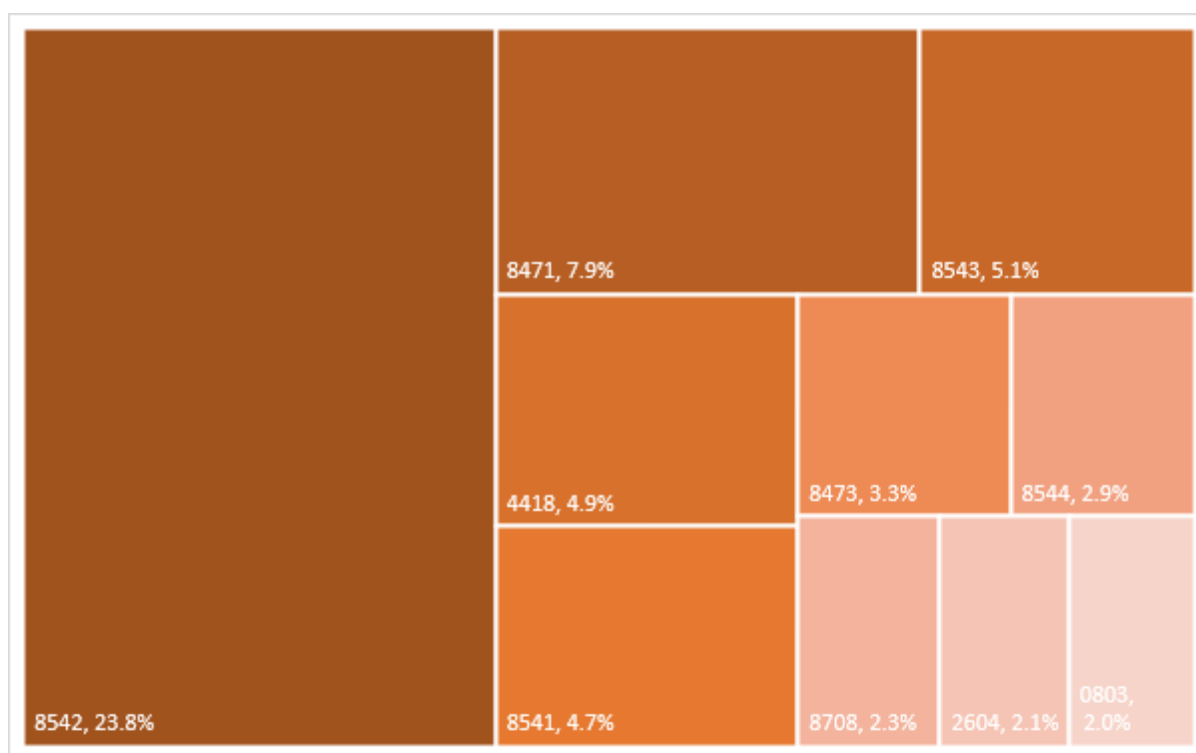
Source: Authors' calculation using data from WITS

Appendix 3 Top 10 Philippine import sources with an FTA to the Philippines, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

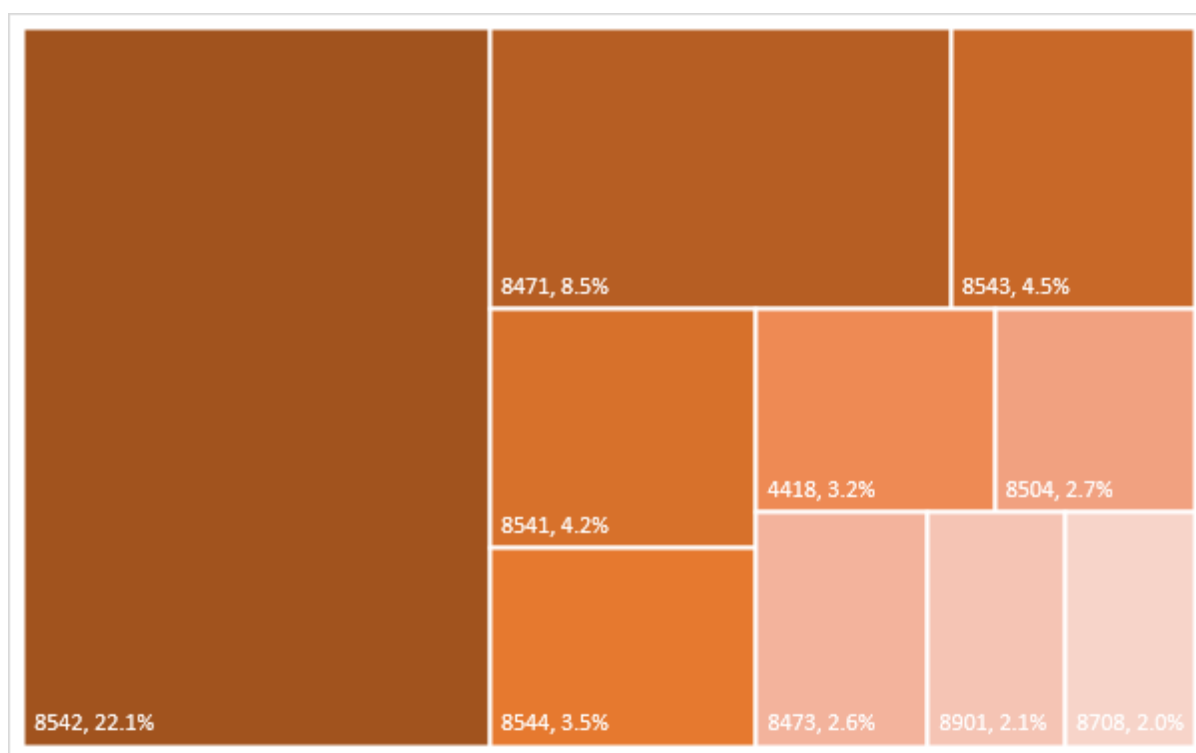
Appendix 4 Top 10 Philippine export products to FTA partners, 2014-2018 (5-year average)



Source: Authors' calculations using data from WITS

Product Description: (0803) Bananas; (2604) Nickel ores and concentrates; (4418) Builders' joinery and carpentry of wood; (8471) Automatic data processing machines and units thereof; (8473) Machinery; (8541) Diodes, transistors, and similar semiconductor devices; (8542) Electronic integrated circuits and microassemblies; (8543) Electrical machines and apparatus; (8544) Insulated wire, cable, and other electric conductors; (8708) Motor vehicles

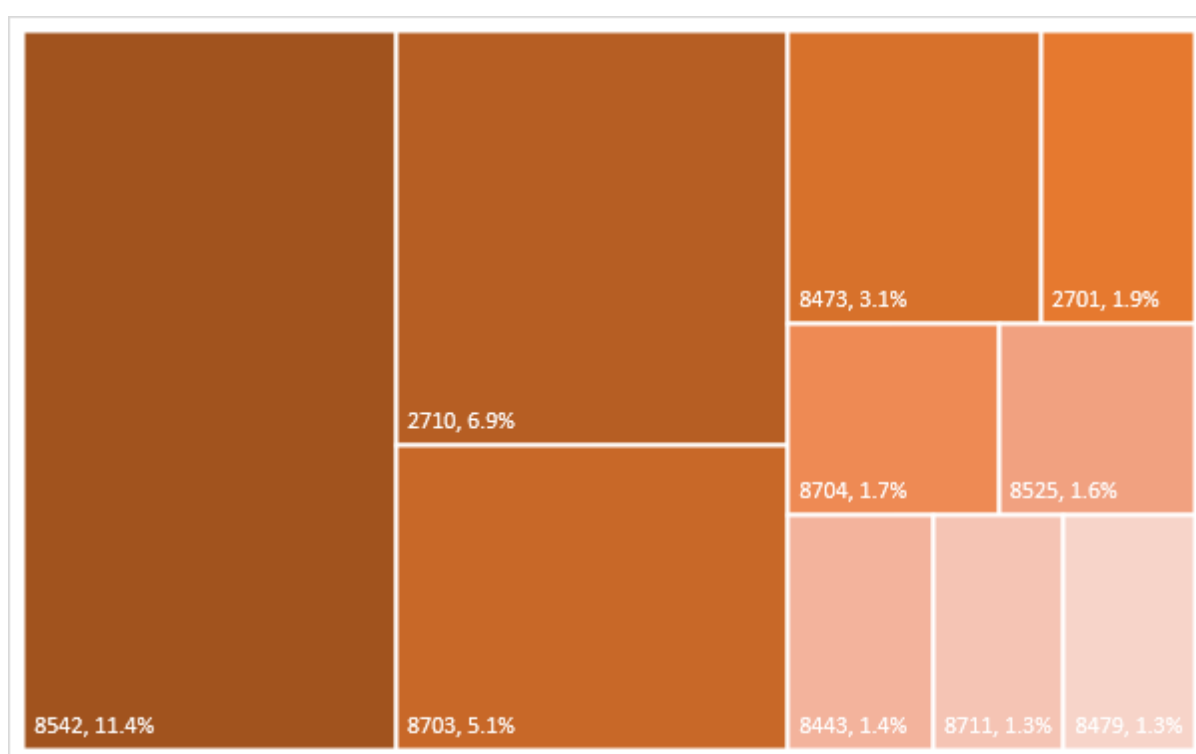
Appendix 5 Top 10 Philippine export products, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (4418) Builders' joinery and carpentry of wood; (8471) Automatic data processing machines and units thereof; (8473) Machinery; (8504) Electric transformers, static converters, and inductors; (8541) Diodes, transistors, and similar semiconductor devices; (8542) Electronic integrated circuits and microassemblies; (8543) Electrical machines and apparatus; (8544) Insulated wire, cable, and other electric conductors; (8708) Motor vehicles; (8901) Cruise ships, excursion boats, ferry-boats, cargo ships, barges, and similar vessels for the transport of persons or goods

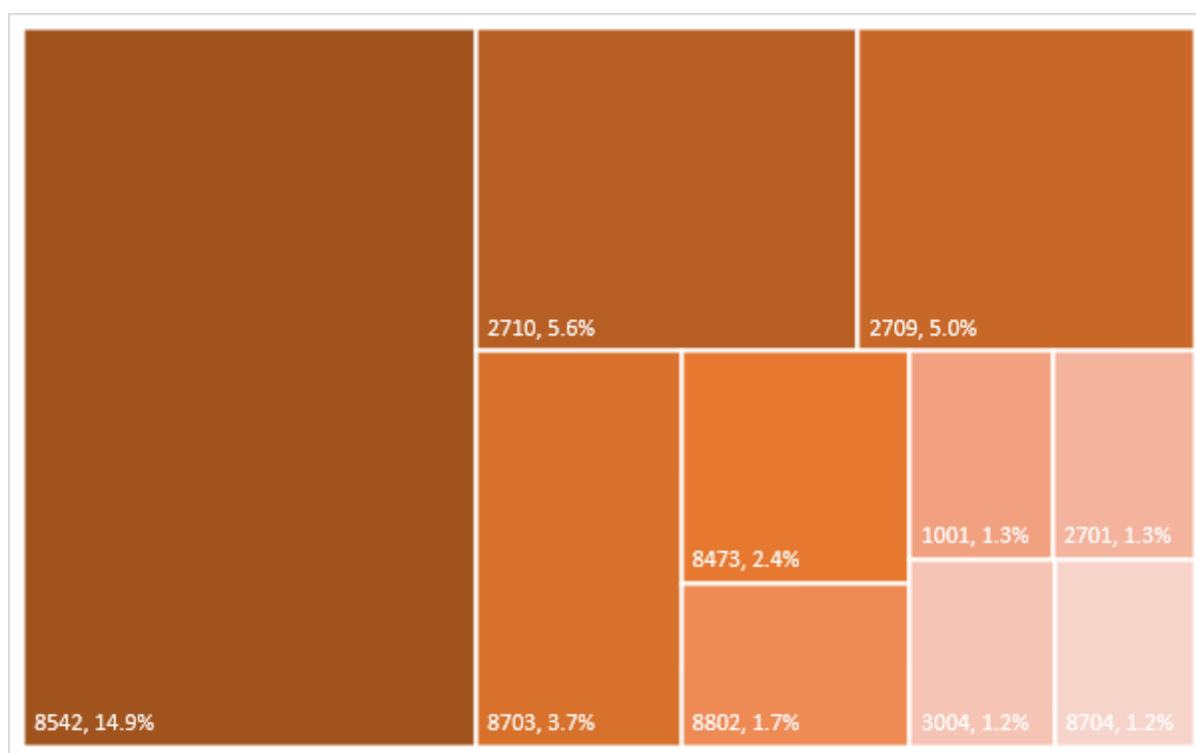
Appendix 6 Top 10 Philippine import products from FTA partners, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (2701) Coal; (2710) Petroleum oils, oils from bituminous minerals, not crude; (8443) Printing machinery; (8473) Machinery; (8479) Machinery and mechanical appliances; (8525) Transmission apparatus for radio- telephony, telegraphy, broadcasting, or television; (8542) Electronic integrated circuits and microassemblies; (8703) Motor cars and other motor vehicles; (8704) Vehicles, for the transport of goods; (8711) Motorcycles and cycles

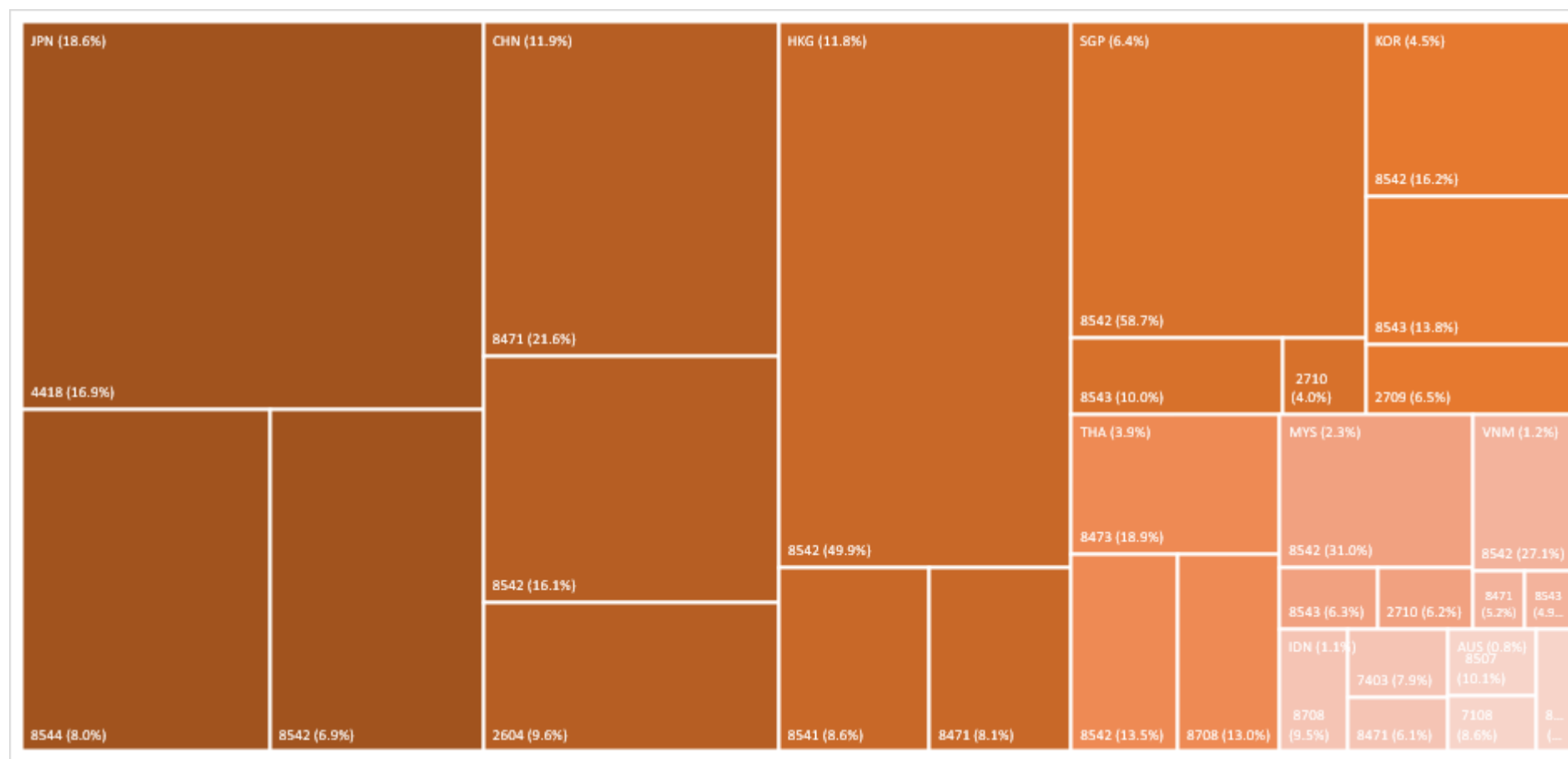
Appendix 7 Top 10 Philippine import products, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (1001) Wheat and meslin; (2701) Coal; (2709) Petroleum oils and oils obtained from bituminous minerals, crude; (2710) Petroleum oils, oils from bituminous minerals, not crude; (3004) Medicaments; (8473) Machinery; (8542) Electronic integrated circuits and microassemblies; (8703) Motor cars and other motor vehicles; (8704) Vehicles, for the transport of goods; (8802) Aircraft, not elsewhere specified

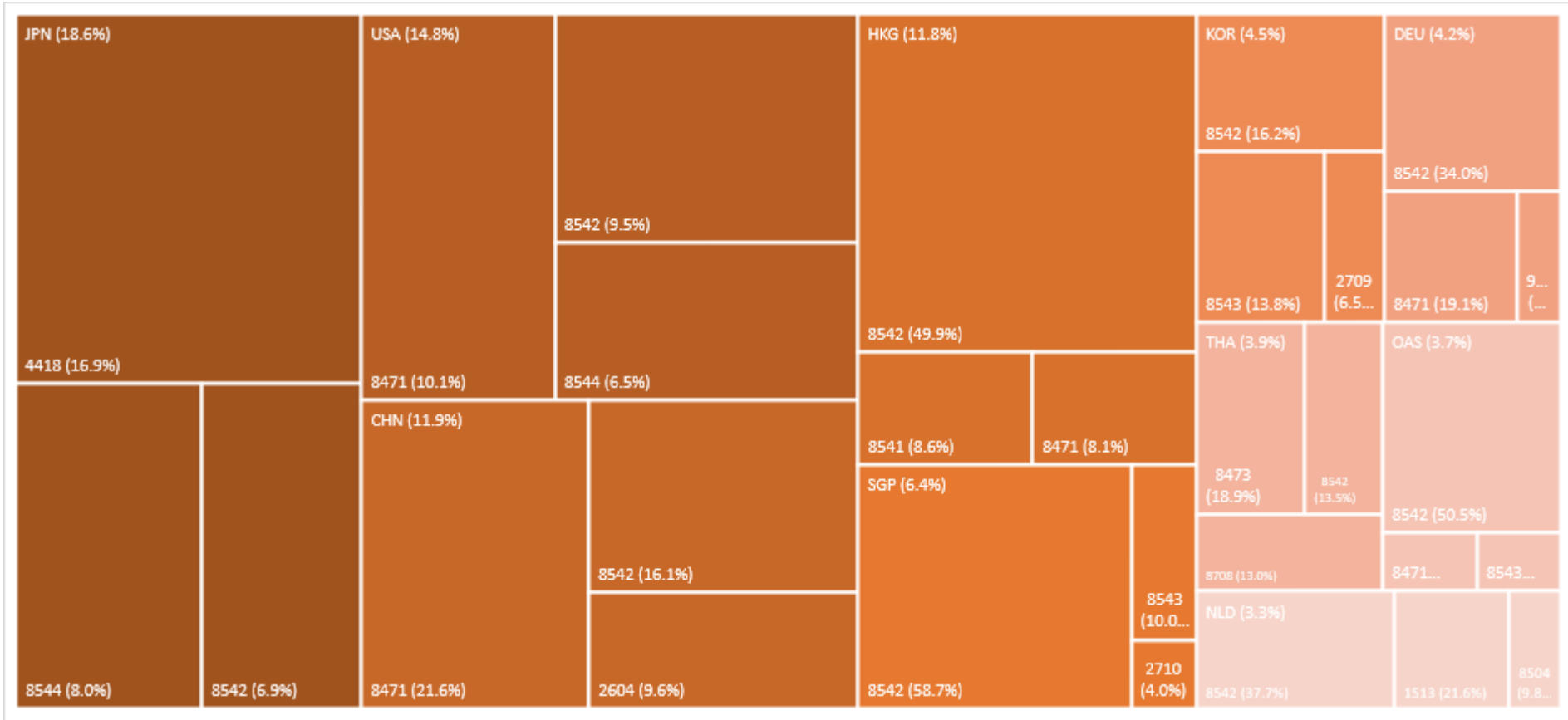
Appendix 8 Top 3 export products by top 10 Philippine export destinations with an FTA to the Philippines, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (2709) Petroleum oils and oils obtained from bituminous minerals, crude; (2710) Petroleum oils, oils from bituminous minerals, not crude; (4418) Builders' joinery and carpentry of wood; (7108) Gold unwrought, or in semi-manufactured forms, or in powder form; (7403) Copper; (8471) Automatic data processing machines and units thereof; (8473) Machinery; (8504) Electric transformers, static converters, and inductors; (8507) Electric accumulators; (8541) Diodes, transistors, and similar semiconductor devices; (8542) Electronic integrated circuits and microassemblies; (8543) Electrical machines and apparatus; (8544) Insulated wire, cable, and other electric conductors; (8708) Motor vehicles

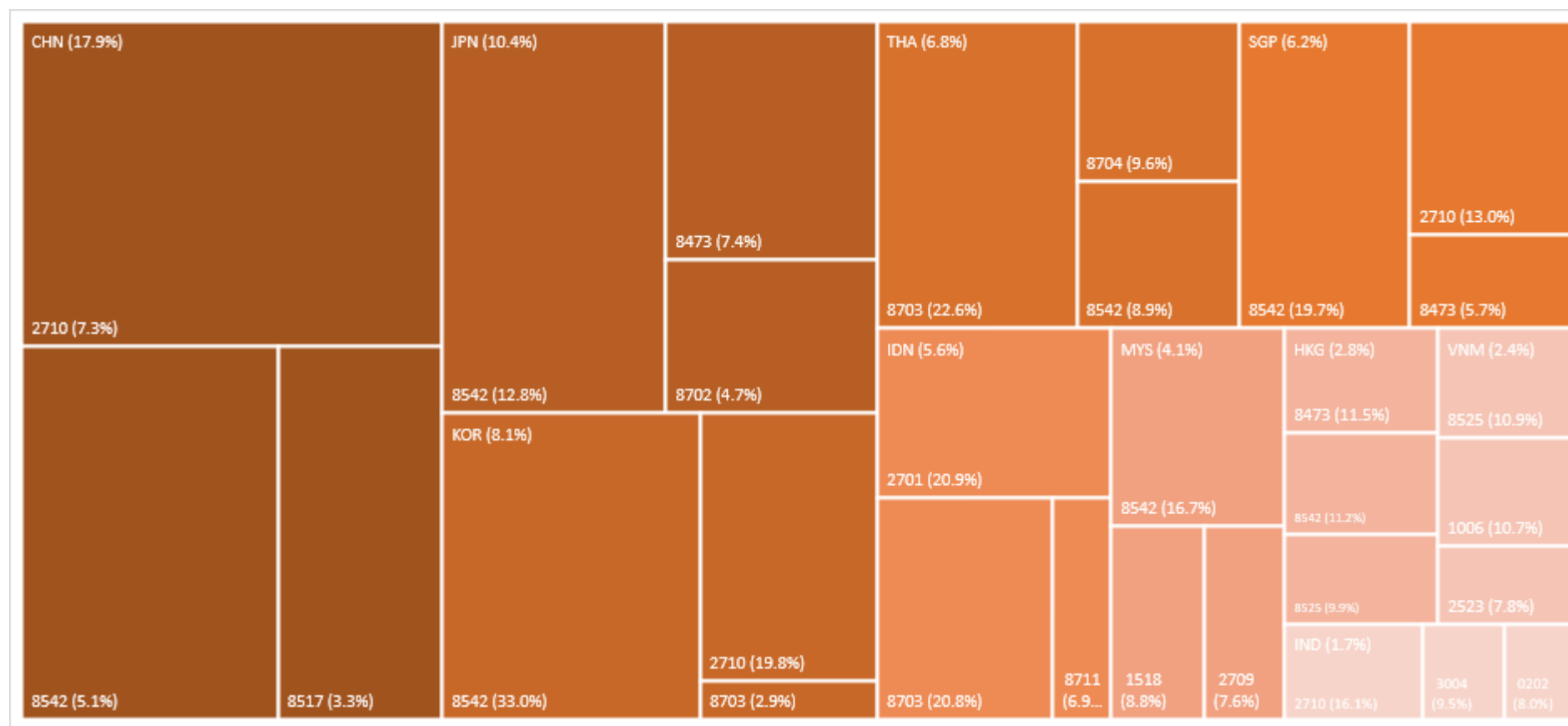
Appendix 9 Top 3 export products by top 10 Philippine export destinations, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (1513) Coconut (copra), palm kernel, or babassu oil and their fractions; (2604) Nickel ores and concentrates; (2709) Petroleum oils and oils obtained from bituminous minerals, crude; (2710) Petroleum oils, oils from bituminous minerals, not crude; (4418) Builders' joinery and carpentry of wood; (7108) Gold unwrought, or in semi-manufactured forms, or in powder form; (7403) Copper; (8471) Automatic data processing machines and units thereof; (8473) Machinery; (8504) Electric transformers, static converters, and inductors; (8507) Electric accumulators; (8541) Diodes, transistors, and similar semiconductor devices; (8542) Electronic integrated circuits and microassemblies; (8543) Electrical machines and apparatus; (8544) Insulated wire, cable, and other electric conductors; (8708) Motor vehicles; (9032) Regulating or controlling instruments and apparatus

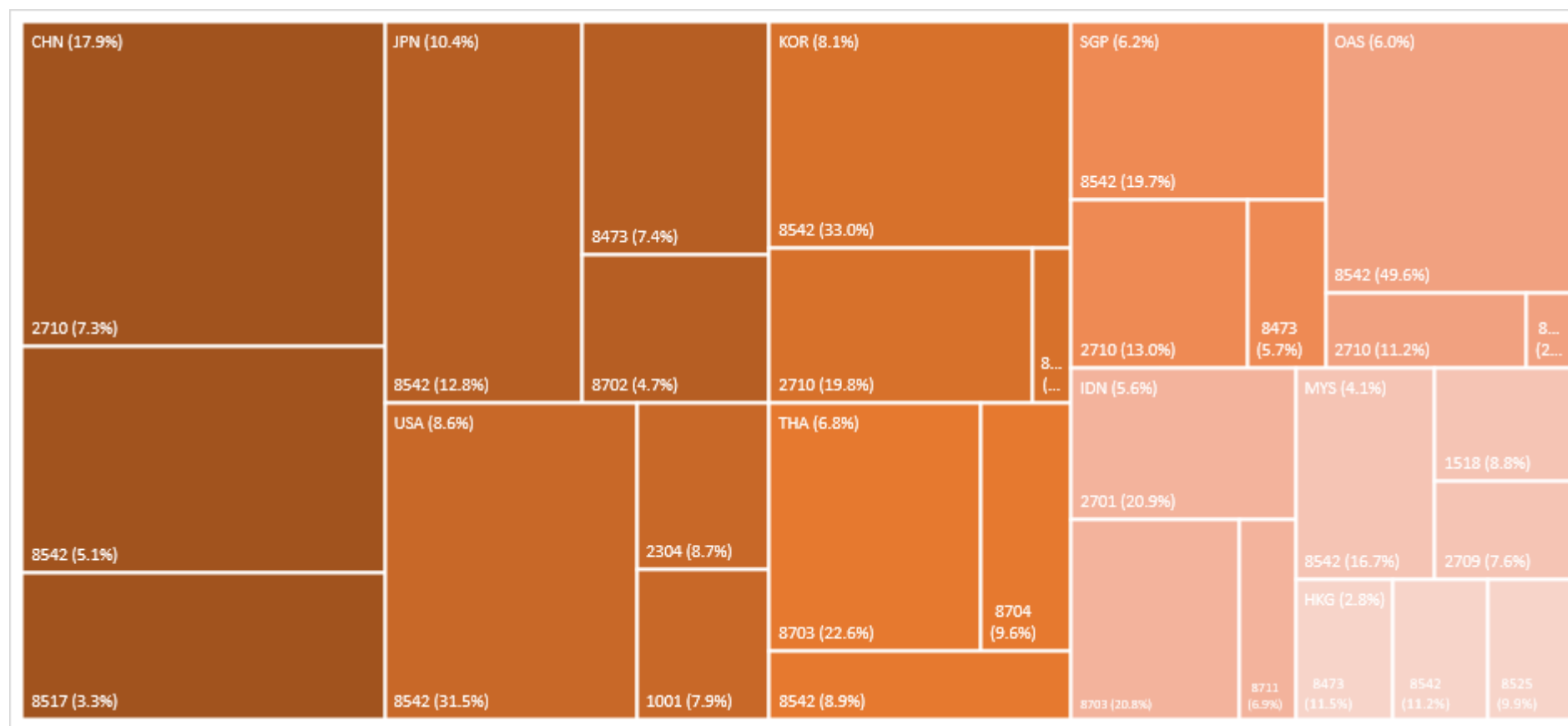
Appendix 10 Top 3 import products by top 10 import sources with an FTA to the Philippines, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (0202) Meat of bovine animals, frozen; (1006) Rice; (1518) Animal or vegetable fats, oils, fractions, modified in any way; (2523) Portland cement, aluminous cement, slag cement, supersulphate cement and similar hydraulic cements; (2701) Coal; (2709) Petroleum oils and oils obtained from bituminous minerals, crude; (2710) Petroleum oils, oils from bituminous minerals, not crude; (3004) Medicaments; (8473) Machinery; (8517) Electrical apparatus for line- telephony or telegraphy; (8525) Transmission apparatus for radio- telephony, telegraphy, broadcasting or television; (8542) Electronic integrated circuits and microassemblies; (8702) Vehicles; (8703) Motor cars and other motor vehicles; (8704) Vehicles, for the transport of goods; (8711) Motorcycles and cycles

Appendix 11 Top 3 import products by top 10 import sources, 2014-2018 (5-year average)



Source: Authors' calculation using data from WITS

Product Description: (0202) Meat of bovine animals, frozen; (1006) Rice; (1518) Animal or vegetable fats, oils, fractions, modified in any way; (2523) Portland cement, aluminous cement, slag cement, supersulphate cement and similar hydraulic cements; (2701) Coal; (2709) Petroleum oils and oils obtained from bituminous minerals, crude; (2710) Petroleum oils, oils from bituminous minerals, not crude; (3004) Medicaments; (8473) Machinery; (8517) Electrical apparatus for line- telephony or telegraphy; (8525) Transmission apparatus for radio- telephony, telegraphy, broadcasting or television; (8542) Electronic integrated circuits and microassemblies; (8702) Vehicles; (8703) Motor cars and other motor vehicles; (8704) Vehicles, for the transport of goods; (8711) Motorcycles and cycles