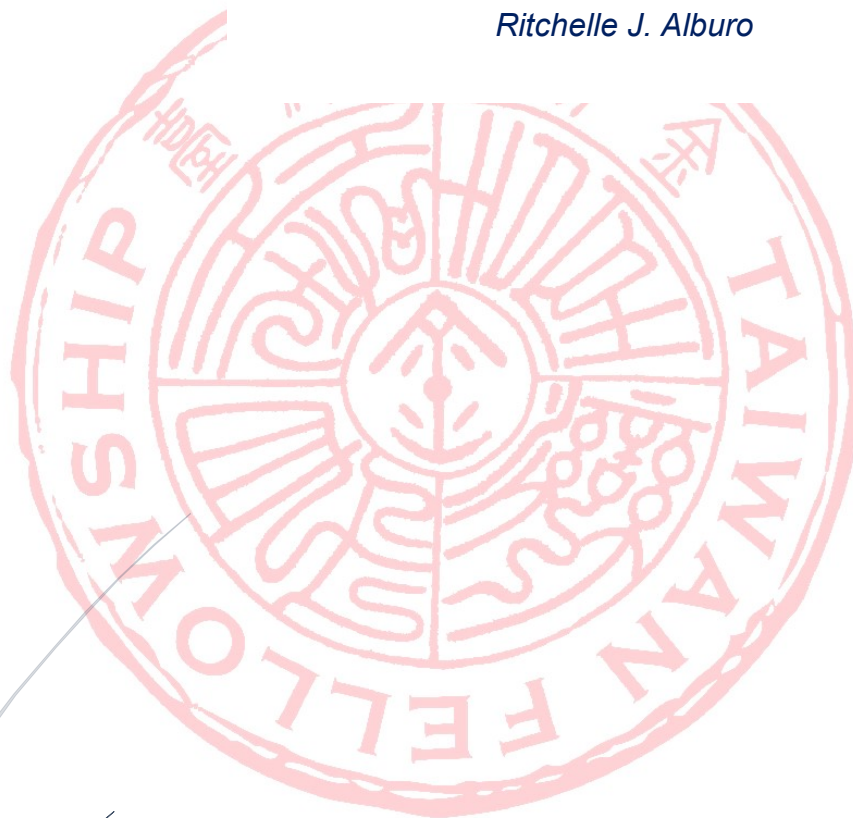


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A Comparative Analysis of the Bilateral  
Trade Dynamics of the Philippines with Taiwan,  
China, and the U.S. under the China-friendly  
Duterte Administration:  
Role of Foreign Policy Preference

*Ritchelle J. Alburo*



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# A Comparative Analysis of the Bilateral Trade Dynamics of the Philippines with Taiwan, China, and the U.S. under the Duterte Administration: The Role of Foreign Policy Preference

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## *Abstract*

In pursuit of an independent foreign policy, the Duterte Administration has advanced ties with China. Using relevant trade indices, the article sets out to compare and contrast the bilateral trade dynamics of the Philippines with China and two competing development partners, the United States (U.S.) and Taiwan, to ascertain whether the Philippines stands to benefit from its foreign policy preference toward Beijing in a manner that economically empowers it to have an independent foreign policy. The study finds the Philippines' foreign policy preference toward China to be discordant with the country's independent foreign policy goal. Aside from spawning a vicious cycle of trade dependency on China, the highly predatory and opportunistic trade relations of the Philippines with China thrives at expense of its mutually beneficial trade with the U.S. and Taiwan making its overall trade dynamics less resilient and dynamic. The Philippines' bilateral trade dynamics with Taiwan and the U.S. have shown to be supportive of its efforts to diversify its export portfolio and move up the global the value chain. The investment-driven vertical intra-industry trade of the Philippines with Taiwan, especially in medium-and high technology goods have enhanced the channels through which trade supports investments, boosting the Philippines' exporting capacity, and increasing its gainful participation in network trade in medium-and high technology goods. Sans appropriate trade policy reset, the current overall trade dynamics of the Philippines is set to asymmetrically integrate the country with China upping its vulnerability to potential economic coercion from the Asian economic giant. With these findings, it is imperative for Philippines to actively engage Taiwan, the U.S., the Association of Southeast Asian Nations, and other development partners to boost its exporting capacity, take advantage of emerging exporting and investment opportunities arising from the U.S.-China trade conflict, and effectively utilize its regional and bilateral trade agreements.

Keywords: international trade, trade war, trade complementarity, trade intensity, interdependence

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## 1. Introduction

In 2016 Rodrigo Duterte assumed the Philippine presidency with a promise to move away from the United States (U.S.) and closer to the latter's rival power, China, in pursuit of an independent foreign policy. Four years thereafter, the Philippines' bilateral relations with China have reached new highs. China is now the Philippines' key trade and investment partner, the second-largest foreign tourism market, and the main driver behind the construction boom in the country.<sup>2</sup> Concurrently, the Philippines has moved to terminate its Visiting Forces Agreement (VFA) with the U.S. just when China's relations with the U.S. is at an all-time low. Said agreement signals the closeness of the Philippines-U.S. alliance against potential encroachment on the Philippines' sovereignty.<sup>3</sup> Back in 1998, the Philippine government under the VFA negotiated the return of U.S. forces after closing the military base in 1992 in response to the Chinese naval patrols and constructions in the Spratly Islands. As the current Administration cozies up to Beijing, China maintains an increasingly assertive presence in the West Philippine Sea (WPS). While both Manila and Beijing were quick to emphasize that territorial and maritime disputes do not constitute the sum total of their relations, the cordial stance of the Duterte Administration toward China with regard to their conflicting claims over the WSP is seen as a geopolitical concession in exchange for more trade and investments with the Asian economic giant.

The delicate balancing of the Philippines between its economic aspirations and geopolitical and security interests in dealing with China has been explored in several studies. Although Ravindran (2012) found the Philippines then to be less economically dependent on China than Vietnam, he argued that the Philippines is more likely to concede to China's geopolitical demands due to the relatively weak anti-China sentiments in the Philippines than in Vietnam. Hendler (2018), however, contended that the decades-old alliance of the Philippines with the U.S. may serve as a major stumbling block to the realization of Duterte's pro-China foreign policy barring excessive economic influence of China in the Philippines. Indeed, asymmetric trade interdependence was posited by Hirschman (1945) as a weapon of political influence at the expense of the security of the dependent state. In measuring the vulnerability of small states to the coercion of a great power, Kim (2019) identifies three economic factors: trade concentration, non-transparency, and reliance on bilateral trade. Hufbauer et al. (2009) likewise has identified several other factors that drive small states to give in to the demands of powerful states, such as trade linkages, relative economic size, and the history of their relations.

For over two decades, the Philippines' foreign relations with China has been in keeping with the Asian economic giant's growing economic clout. Under the Administration of Gloria Macapagal-Arroyo, the Philippines maintained the equi-balance between Washington and Beijing to extract as much political and economic gains from both sides, but the Philippines eventually leaned more

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<sup>2</sup> L.P. Blanco III, (2019, July 18), Duterte's Pivot to China: Gains, Challenges, and Promises, *Philippine Daily Inquirer*, <https://opinion.inquirer.net/122680/dutertes-pivot-to-china-gains-challenges-promises>

<sup>3</sup> J. Schaus, (2020, February 12), What is the Philippines-United States Visiting Forces Agreement, and Why Does It Matter?, *Center for Strategic and International Studies*, <https://www.csis.org/analysis/what-philippines-united-states-visiting-forces-agreement-and-why-does-it-matter>



toward China for economic reasons.<sup>4</sup> Arroyo concluded 83 agreements with China compared to only 15 under her predecessor Joseph Estrada and nine under her successor Benigno Aquino III, including agreements on sensitive issues such as cooperation on oil and gas development in the South China Sea.<sup>5</sup> Under the Arroyo Administration, closer relations between China and the Philippines have engendered vast economic opportunities, albeit tainted with allegations of corruption around Chinese investments.<sup>6</sup> The Duterte Administration adopts the same foreign policy preference toward Beijing as the Arroyo Administration. At the height of the global pandemic, Manila has taken every opportunity to show its blind adherence to the One-China policy to the chagrin of Taipei, a key development partner. Duterte has reiterated the Philippines' strong resolve to further expand economic ties and people-to-people exchanges with Beijing. This has yielded various agreements covering cooperation in the areas of education, science and technology, finance, and customs, among others, most of which has yet to materialize.<sup>7</sup> Whether the Philippines stands to benefit from its deepening economic linkages with China in a manner that empowers it to have an independent foreign policy is a nagging policy question. A cursory review of the developments in Philippines-China relations suggests that the Philippines could be losing to China on the economic front. The growing importance of China as a trading and investment partner to the Philippines has been attended with a surge of low-priced Chinese imports, a large amount of which are smuggled, and an influx of Chinese nationals. Since 2017, the Bureau of Immigration reported that four million Chinese nationals have come to the Philippines, many of whom entered the country illegally and are engaged in shady activities.

In view of the influence of economics in the dynamics of political interaction between the Philippines and China, the article sets out to re-evaluate the Philippines' economic relations with China during the first two years of the Duterte Administration (2016-2018), zeroing in on the aspect of their relations that have far and wide implications on both countries' long-term economic and political development, i.e., international trade. Considering the impact of the Philippines' deepening trade ties with China on its trading relationship with competing development partners, Taiwan and the U.S., the article compares and contrasts the dynamics of the Philippines' bilateral trade with China vis-à-vis Taiwan and the U.S. within the framework of the South-South trade and North-South trade debate. Using a suite of trade indicators, the article addresses three issues:

- What is the extent and nature of China's dominance in Philippine trade?
- How does the Philippines' growing trade ties with China impact its bilateral trade with Taiwan and the U.S.?
- How does the Philippines' trade relationship with China compare with its bilateral trade relations with the U.S. and Taiwan in terms of fostering a balanced and mutually beneficial trade?

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<sup>4</sup> B. Hendler, (2018), Duterte's pivot to China, and prospects for settling the South China Sea disputes. *Contexto International*, 40(2), 319-337.

<sup>5</sup> T. S. Clemente, (2016), Understanding the economic diplomacy between the Philippines and China, *International Journal of China Studies*, 7 (2), 215-233.

<sup>6</sup> M. Ravindran, (2012), China's potential for economic coercion in the South China Sea disputes: A comparative study of the Philippines and Vietnam, *Journal of Current Southeast Asian Affairs*, 31(3), 105-132.

<sup>7</sup> Presidential Communications Operations Office of the President, (2019, September 1), Palace reports President Duterte's fruitful China visit, [https://pcoo.gov.ph/news\\_releases/palace-reports-president-dutertes-fruitful-china-visit/](https://pcoo.gov.ph/news_releases/palace-reports-president-dutertes-fruitful-china-visit/)

The thrust of the article is two-fold: to provide policy insights on how the Philippines' may manage its trade interdependence with China, U.S. and Taiwan, and to inform the contemporary policy debate on whether trade between and among developing economies, i.e., South-South trade replaces or complements North-South trade and yields better development outcomes. China is a large emerging economy that plays an active role in South-South trade, especially in global production-sharing activities and the U.S. and Taiwan are active players in the North-South trade. A deeper look into the patterns of the Philippines' trade with these three countries would yield instructive insights on the relative benefits and challenges of South-South trade and North-South trade. The article is divided into three main sections. The first section discusses the direction of the Philippines' bilateral trade relationship with the three countries in question and its impact on their relative dominance in Philippine trade. The third section looks into the influence of trade complementarities vis-à-vis the current foreign policy preference of the Philippines in the prevailing trade patterns of the Philippines with Taiwan, China and the U.S. The last section re-evaluates the Philippines' trading relationship with the three countries.

## 2. Analytical Approach and Methodology

A plethora of studies have documented a positive relationship between trade openness and development (e.g., Barro and Sala-i-Martin, 1995; Dollar, 1992; Edwards 1998).<sup>8</sup> The trade route has afforded Southern countries, especially the East Asian economies enormous development dividends. For some developing economies, however, the trade route to development is strewn with obstacles and pitfalls, engendering a vicious cycle of dependency and vulnerability that triggers tension between peripheral states of the South and the advanced countries in the North.<sup>9</sup> Traditionally, developing countries in the South mainly export primary commodities in exchange for imports of more technology-and skill-intensive manufactures from rich countries in the Global North. The higher income elasticity of Northern exports relative to those of the South, however, often results in an uneven development, spurring an increasingly asymmetric interdependence. To address the asymmetric nature of North-South trade, South-South trade has been explored as an alternative trade route in which the Global South, particularly the large emerging economies, plays a central role. The changing geography of economic strength marked by the rising importance of large emerging economies like China, India and Brazil both as sources of demand and production sites and the international fragmentation of production processes have hiked the prospect of moving beyond the unequal North-South division to a potentially more balanced global development.

The growing prominence of South-South trade brings to the fore the opportunities, downsides and limitations of South-South trade and its potential to rival South-North trade. UNCTAD (2004) finds South-South trade to be vital in expanding trading opportunities, diversifying export base and creating new complementarities between and among developing countries. Within the context of the global value chains (GVCs), South-South trade has created more opportunities for firms to

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<sup>8</sup> See Arora and Vamvakidis (2004) for a review of literature on the growth-openness nexus.

<sup>9</sup> K. Barbieri, (1996, February), Economic interdependence: A path to peace or a source of interstate conflict?, *Journal of Peace Research*, 33(1), 29-49.

engage in more tasks and participate in higher value-added manufacturing activities than the North-South trade.<sup>10</sup> Firms in South-South value chains have also shown to hire more skilled workers and create more high-skilled jobs than firms exporting to the North. In addition to these advantages, participation in South-South GVCs is easier than in North-South GVCs on account of low entry requirements to South-South GVC activities reflective of the lax standards specifications.<sup>11</sup> With the so-called frugal innovation, Southern countries have developed adaptable and affordable technologies suitable to the needs of other developing economies.<sup>12</sup>

South-South trade, however, has its downsides and limitations. The relatively low income of developing countries puts a lid on the opportunities for investment and trade, particularly horizontal intra-industry trade, i.e., the exchange of similar but differentiated goods. The potential of win-lose outcomes also tends to be high in South-South trade given the similarity in production and trade structures of developing countries.<sup>13</sup> While the low entry requirements to South-South GVCs may encourage high participation among developing countries in GVC activities, it also intensifies competition leading to razor-thin profit margins.<sup>14</sup> South-South competition may also unleash a race to the bottom in labor conditions as well as in quality standards. The lower quality standards in South-South GVCs could potentially be perilous in some industries, such as pharmaceuticals, placing the health of consumers at risk.<sup>15</sup> Some scholars have also questioned the comparative lack of corporate social responsibility and environmental standards initiatives among Southern companies.<sup>16</sup> There is also a question on the sustainability of the South-South trade and its potential to serve as an alternative to North-South trade. There appears to be a consensus among scholars and policymakers that South-South trade does not replace but rather complements North-South trade. Behind a vibrant South-South trade is a strong North-South trade and investment relations creating a complex North-led interdependence between Southern countries. Multinational enterprises headquartered in the North have the upper hand in deciding on the location of input processing based on location-specific advantages (e.g., abundance of natural resources, low labor cost, skilled workforce, and market size). The global production sharing activities continue to be largely reliant on the capital, technology and final goods market of the North.

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<sup>10</sup> S. K. Mohanty, L. Franssen, and S. Saha, (2019), The Power of international value chains in the global South, International Trade Center, [https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Global%20South%20value%20chains\\_final\\_Low-res.pdf](https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Global%20South%20value%20chains_final_Low-res.pdf)

<sup>11</sup> R. Kaplinsky and M. Farooki, (2011), What are implications for the global value chains when the market shifts from the north to the south? *International Journal of Technological Learning, Innovation and Development*, 4(1/2/3), 13-38

<sup>12</sup> S. K. Mohanty, L. Franssen, and S. Saha, (2019), [https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Global%20South%20value%20chains\\_final\\_Low-res.pdf](https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Global%20South%20value%20chains_final_Low-res.pdf)

<sup>13</sup> H. Yeung and N. Coe, (2015), Toward a dynamic theory of global production networks, *Economic Geography*, 91(1), 29-58.

<sup>14</sup> G. Gereffi and J. Lee, (2012), Why the world suddenly cares about global supply chains, *Journal of Supply Chain Management*, 48(3), 24-32.

<sup>15</sup> R. Horner (2016), A new economic geography of trade and development? Governing South-South trade, value chains and production networks, *Territory, Politics, Governance*, 4(4), 400-420.

<sup>16</sup> D. Aykut and A. Goldstein, (2007), Developing country multinationals: south-south investment comes of age, In *Industrial Development for the 21<sup>st</sup> century: Sustainable Development Perspective* (pp. 85-116), United Nations Department of Economic and Social Affairs.



Moreover, the potential benefits from South-South may vary across Southern countries given their heterogeneity. The economic disparities within the Southern countries cast doubt on the potential of South-South cooperation to move beyond the asymmetric nature of North-South trade. A growing literature<sup>17</sup> on the role of large emerging economies, particularly China and India in Africa suggests that while trading relationships may overlap with some of the desired objectives of South-South trade, the associated impacts may not necessarily be different from those of the North-South trade. New trading and investment relationships have shown to remain uneven and exploitative. Intra-regional exports of medium-technology goods from the emerging country group was found to be almost four times greater than the developing country group, with the gap widening marginally.<sup>18</sup> Where there is intense competition, firms within the Global South are likely to be unevenly placed to capture the benefits of South-South GVCs. Unlike in the North where consumer preferences are based on product quality, innovation and differentiation, the price is practically the sole determinant of demand in developing countries, placing the large emerging economies at a great advantage due to economies of scale.<sup>19</sup>

Drawing on the evolving literature on the South-South trade, the article sets out to analyze the bilateral trade dynamics of the Philippines with two Northern countries, i.e., Taiwan and the U.S. and one Southern country, China. The period under consideration is the first two years of the Duterte Administration (2016-2018) under which the Philippine foreign policy has shifted towards China. The main trade indicators include but not limited to trade growth rates, trade shares, trade intensity index, trade complementarity index, trade similarity index, and revealed comparative advantage.<sup>20</sup> All the data are obtained from the International Trade Center (ITC) database and follow the ITC product classification and nomenclature at two-digit and four-digit Harmonized System Code, unless otherwise stated.

#### *State of the Philippines' Trade Relationship with Taiwan, China and the U.S.*

Against the backdrop of the Philippines' recent foreign policy slant towards China, the state of the Philippines' trading relationship with China is discussed vis-à-vis its' its trade relations with Taiwan and the U.S. based on three trade indicators: trade growth, shares and intensity index.<sup>21</sup>

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<sup>17</sup> R. Horner, (2016), A new economic geography of trade and development? Governing South-South trade, value chains and production networks, *Territory, Politics, Governance*, 4(4), 400-420. .

<sup>18</sup> S. K. Mohanty, L. Franssen, and S. Saha, (2019), The Power of International Value Chains in the Global South, International Trade Center

<sup>19</sup> R. Kaplinsky and M. Farooki, (2011), What are implications for the global value chains when the market shifts from the north to the south?, *International Journal of Technological Learning, Innovation and Development*, 4(1/2/3), 13-38

<sup>20</sup> UNESCAP, (2009), Trade Statistics in Policymaking, United Nations, [https://www.unescap.org/sites/default/files/0%20-%20Full%20Report\\_27.pdf](https://www.unescap.org/sites/default/files/0%20-%20Full%20Report_27.pdf)

<sup>21</sup> See Economic and Social Commission for Asia and the Pacific (2009) for the definition and calculation of all relevant trade indicators.



*Trade Growth Patterns.* The compound annual growth rate (CAGR)<sup>22</sup> of the trade of the Philippines with Taiwan, China and U.S. and other relevant trading partners is calculated to track the direction of its bilateral trade with the three countries vis-à-vis the latter's trade with the world to ascertain any trade growth bias in favor or against the three countries during period 2016-2018. Depending on the relative growth trajectories of the Philippines' trade with other countries, the disparity in the growth performance of the Philippines' trade with Taiwan, China and the U.S. may translate to proportionate shifts in relative shares of China, Taiwan and the U.S. in Philippine trade.

*Trade Shares.* Trade share statistics indicates the importance of a particular trading partner in the overall trade profile of an economy. By definition, trade share is the percentage of trade of one trading partner to the country of interest in the latter's total trade.<sup>23</sup> The relative shares of trading partners/products in a country's trade can be used to compute for the degree of market/export concentration as in Herfindahl-Hirschman Index (HHI). HHI is the sum of squared shares of each trading partner/product category in the total trade of a given country. HHI addresses the question of whether or not an economy is heavily reliant on a small number of export markets, or sells to a diverse range of economies. The HHI approaches zero when the country of interest has a large set of trading partners with relatively equal shares and reaches a maximum of 10,000 points when the country of interest trades with a single country. The HHI increases as the number of trading partners decreases and as the disparity in trade shares between those trading partners broadens.<sup>24</sup>

*Trade Intensity.* Trade intensity index indicates whether or not the observed share of trade is greater than the world average, or 'intense' relative to what is expected based on trade complementarity. It is thus used to measure the degree of closeness of two countries as trading partners. The trade intensity index can be thought of as a normalized export share; it is expressed as the ratio of two export shares. The export intensity index of country *i* with respect to country *j* is shown as follows:

$$XII_{ij} = \frac{\left[ \frac{X_{ij}}{X_i} \right]}{\left[ \frac{M_j}{M_w} \right]} * 100$$

Where:  $XII_{ij}$  refers to export intensity index of trade of country *i* with country *j*;  $X_{ij}$ , exports of country *i* to country *j*;  $X_i$ , total exports of country *i*;  $M_j$ , total imports of country *j*;  $M_w$ , total world imports.

Import intensity index ( $MII_{ij}$ ) can also be measured in similar way:

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<sup>22</sup> The CAGR formula is defined as:  $CAGR = \left( \frac{End\ Value}{Initial\ Value} \right)^{\frac{1}{number\ of\ years}} - 1$

<sup>23</sup> It is mathematically defined as:  $\frac{x_{sd}}{x_{wd}}$ ; where *i* is the set of product categories being traded by country *d* with trading partner *s*, *x* is the bilateral trade flow from the country *d* to trading partner *s*, and *X* is the set of product categories traded by country *d* to the world.

<sup>24</sup> US Department of Justice, Herfindahl-Hirschman Index, [justice.gov/atr/herfindahl](http://justice.gov/atr/herfindahl)

$$MII_{ij} = \frac{\left[ \frac{M_{ij}}{M_i} \right]}{\left[ \frac{X_j}{X_w} \right]} * 100$$

Where:  $MII_{ij}$  refers to export intensity index of trade of country  $i$  with country  $j$ ;  $M_{ij}$ , exports of country  $i$  to country  $j$ ;  $M_i$ , total exports of country  $i$ ;  $X_j$ , total imports of country  $j$ ;  $X_w$ , total world imports;  $X_i$ , total imports of country  $i$ .

Trade intensity index takes a value between 0 and  $+\infty$ . Values greater than 1 indicate an 'intense' trade relationship often driven by a high level of trade complementarity between two countries or regions. If the export portfolio of one country does not match the demand portfolio of another country, the trade potential between two countries is expected to be low.

#### *Trade Intensity-Complementarity Nexus: Role of Foreign Policy Preference*

To ascertain the influence of the Philippines' foreign policy pivot to China on its trade relationship with China, Taiwan, and the U.S., the study examines the trade intensity-complementarity nexus in its trade with the three countries at the first and second year of the Duterte Administration. The relationship between trade complementarity and trade intensity is not straightforward. Two countries/regions may have high trade complementarity but low trade intensity, an indication that trade complementarity has not yet been exploited. Conversely, two countries may have low trade complementarity but high trade intensity. Although trade complementarity provides a strong basis for two countries to trade with each other, there are several other factors that influence the trade relations of two countries, such as geographic proximity, cultural similarities, historical trading relationships, and preferential trade agreements.<sup>25</sup> Except for preferential trade agreements, these factors do not change over time. The gaps in the trade intensity-complementarity nexus in the Philippines' trade relationship with Taiwan, China, and the U.S. can therefore be taken as an indication of the influence of foreign policy preference. This is supported by an examination of the competitive dynamics of the Philippines' trade relationship with Taiwan, China, and the U.S. based on trade similarity index and a simple correlation analysis of its trade growth and intensity patterns with the three countries.

**Trade Complementarity Index.** The trade complementarity index measures the degree to which the global exports of one country match the global imports of another country. The index is calculated as:

$$TCI^{ij} = 100 \left[ 1 - \frac{\sum_{k=1}^n ABS(m_k^i - j_k^j)}{2} \right]$$

Where  $m_k^i$  is the share of product  $k$  in the imports of country  $i$  and  $j_k^j$  is the share of product  $k$  in the exports of country  $j$ .

<sup>25</sup> M. Shirotori and A.C. Molina, (2009), South-South Trade: The Reality, United Nations Conference on Trade and Development, [https://unctad.org/system/files/official-document/ditctab20081\\_en.pdf](https://unctad.org/system/files/official-document/ditctab20081_en.pdf)

An index of zero suggests that no products imported by country i overlaps with the exports of country j and index of 100 suggests that all imports of country i overlap with the exports of country j, implying that countries i and j are natural trading partners.<sup>26</sup>

*Trade Similarity Index.* The trade similarity index is used to measure the similarity or dissimilarity of the export compositions of any two countries with respect to a third market. The index based on the share of each product in each country's total exports and is calculated as the sum of the minimum value for each product. Formally stated:

$$ESI(ab, c) = \sum_j \min \left[ \frac{X_{j(a,c)}}{\sum X_{j(a,c)}}, \frac{X_{j(b,c)}}{\sum X_{j(b,c)}} \right]$$

where  $ESI(ab, c)$  refers to the similarity index of countries a and b in the common market c,  $X_{j(a,c)}$  refers to the exports of product j from country a to country c and, similarly,  $X_{j(b,c)}$  refers to the exports of product j from country b to country c,  $\sum X_{j(a,c)}$  and  $\sum X_{j(b,c)}$  are total exports of country a and b to country c, respectively. The first term is the share of product i in country a's exports to country c, and the second term is the share of product i in country b's exports to country c. An index value that is close to unity suggests that two countries in question are perfect competitors in a given market. An increase in the ESI over time indicates convergence in export structures and thus a higher degree of competition in the third market. If the convergence occurs between developed and developing countries, an increase in the index value suggest rapid industrialization in developing countries.<sup>27</sup>

#### *Re-evaluating the Philippines' Trade Relationship with Taiwan, China and the U.S.*

To assess the trade effects of the China-friendly foreign policy stance of the current Administration, the study delves into the nature of economic linkages between the Philippines and the three countries.<sup>28</sup> A development-oriented bilateral trade dynamics is characterized by market and product diversification with an increasing export share of medium-and high technology products in the export bundle of a developing country. Low-technology manufactures tend to have stable, well-diffused technologies, which are primarily embodied in capital equipment (e.g., textile fabrics, clothing, headgear, footwear, leather manufactures, and travel goods, pottery, simple metal parts and structures, furniture, jewelry, toys, and plastic products). Medium-technology products comprise the bulk of skill- and scale-intensive capital goods and intermediate goods representing the core of industrial activity in mature economies.<sup>29</sup> These products have complex technologies, with

<sup>26</sup> X. Wei and T. Ze, (2018), An Analysis of Competitiveness and Complementarity between China and Guinea Trade under the "Belt and Road" Initiative, *Advances in Social Science, Education and Humanities Research*, Vol. 237, 355-360.

<sup>27</sup> P. Wang and X. Liu, (2015), Comparative Analysis of Export Similarity Index between China and EU, *International Conference on Management Science and Management Innovation*, China.

<sup>28</sup> K. Barbieri (1996, February), Economic Interdependence: A Path to Peace or a Source of Interstate Conflict?, *Journal of Peace Research*, 33(1), 29-49

<sup>29</sup> Rahul Anand, Saurabh Mishra, and Nikola Spatafora, (2012, February 1), Structural Transformation and the Sophistication of Production, *IMF Working Paper*, 12(59),



moderately high levels of R&D, advanced skill requirements and lengthy learning periods (e.g., automotive products; process industries (synthetic fibers, chemicals and paints, fertilizers, plastics, iron, pipes/tubes); and engineering industries (engines, motors, industrial machinery, pumps, switchgear, ships, watches). High-technology products have advanced and fast-changing technologies, with high R&D investments and strong emphasis on product design (e.g., electronics and electrical products and other high-tech sectors (pharmaceuticals, aerospace, optical/measuring instruments, cameras).

Although market and product diversification does not guarantee growth, it helps countries to hedge against trade shocks that often results in major growth disruptions. Wide fluctuations in export earnings as a result of overreliance on primary commodities have negatively affected income, employment and investment.<sup>30</sup> Horizontal export diversification into completely new export sectors may generate positive externalities on the rest of the economy as export-oriented sectors gain from dynamic learning activities due to contacts with foreign purchases and exposure to international competition.<sup>31</sup> Diversification out of primary into manufactured exports also supports long-term development as primary sectors exhibit limited spillovers.

In addition to the typical goals of diversification and industrial upgrading, the study characterizes the nature of the Philippines' trading relationship with Taiwan, China, and the U.S. in terms of symmetry, mutuality of gains and trade growth prospects based on the patterns of revealed comparative advantage (RCA).

*Revealed Comparative Advantage.* International trade theory describes how inter-industry trade (trade in different products) is driven by comparative advantage, or lower opportunity cost.<sup>32</sup> In theoretical models, comparative advantage is expressed in terms of relative prices without trade. Since these are not observed, comparative advantage is indirectly measured using the revealed comparative advantage indices (RCA), such as the Balassa index of RCA. The Balassa RCA index uses the trade pattern to identify the sectors in which an economy has a comparative advantage, by comparing the country of interests' trade profile with the world average. Revealed comparative advantage (RCA) determines the prominence of the set of products in the export bundle of the exporting country relative to its dominance in global trade.<sup>33</sup> The higher degree of specialization of

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<https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Structural-Transformation-and-the-sophistication-of-Production-25746>

<sup>30</sup> R. Sannasse, B. Seetanah and M. J. Lamport, (2014, February 1), Export diversification and economic growth: the case of Mauritius, in Jansen, M., M. Jallab and M. Smeets (eds.), *Connecting to Global Markets: Challenges and Opportunities: Case Studies Presented by WTO Chair-Holders*, WTO, Geneva, <https://doi/10.30875/0beb76b7-en>

<sup>31</sup> A. Fahim, (2000), Export diversification, composition, and economic growth: Evidence from cross-country analysis, *Applied Economics Letters*, 7(9), 559-62.

<sup>32</sup> Economic and Social Commission for Asia and the Pacific (2009, January 1), Trade statistics in policymaking – A handbook of commonly used trade indices and indicators, Revised Edition, UNESCAP, <https://www.unescap.org/resources/trade-statistics-policymaking-handbook-commonly-used-trade-indecas-and-indicators-revised>

<sup>33</sup> A. Nakhoda, (2016), A practical guide to trade policy analysis: A case study on Pakistan, *Institute of Business Administration, Karachi*. <https://www.iba.edu.pk/ACaseStudyonPakistanbyDrAadilNakhoda.php>

a country in a given product relative to the world is taken as a general indication and first approximation of a country's competitive export strengths.<sup>34</sup>

The Balassa RCA index of country *i* for product *j* is measured by the product's share in the country's exports in relation to its share in world exports:

$$RCA_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_{wt})$$

Where  $x_{ij}$  and  $x_{wj}$  are the values of country *i*'s exports of product *j* and world exports of product *j* and where  $X_{it}$  and  $X_{wt}$  refer to the country's total exports and total world exports, respectively.

If the index value exceeds unity, a country is said to have a revealed comparative advantage in a product; otherwise, it has a comparative disadvantage.

The import RCA is the import analogue of the Balassa index of RCA. The import RCA index is obtained by replacing the export value with the value of imports in the Balassa index formula:

$$MRCA_{ij} = (m_{ij}/M_{it}) / (m_{wj}/M_{wt})$$

Where  $MRCA_{ij}$  is the import RCA of country *i*'s imports of product *j*,  $m_{ij}$  and  $m_{wj}$  are the values of country *i*'s imports of product *j* and world imports of product *j*, respectively, and  $M_{it}$  and  $M_{wt}$  refer to the country's total imports and total world imports, respectively.

An MRCA that is equal or higher than unity indicates strong import specialization patterns reflecting a country's comparative disadvantage. In a vertical intra-industry trade, a net import RCA in a given sector indicates specialization in the low-end segment of the supply chain, such as assembly activities and production of less complex parts and components.<sup>35</sup>

We have identified four types of trading relationships based on different RCA patterns.

*Complementary trade relationship.* The trading relationship of two countries is complementary if the vast majority of the product categories being traded are those in which the exporting country has a comparative advantage and the importing country has a comparative disadvantage. Given the dissimilarity in the trade structures of Northern and Southern countries, North-South trade relationship is characterized as highly complementary with the Southern countries supplying the Northern markets with primary products, such as food, minerals and raw materials in which the South has a comparative advantage and the North has a comparative disadvantage. Such trading relationship thus tends to thrive even without strong policy support. Trading relationships that are anchored on complementary RCA patterns also affords strong trade creation effects with minimal structural adjustment cost when trade barriers are dismantled.

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<sup>34</sup> United Nations Conference on Trade and Development (2009, January 1), Revealed Comparative Advantage, UNCTAD.

<sup>35</sup> L. Yueh, B. Gangnes and A. V. Assche, (Eds), 2010, *Future of Asian Trade: Economic Development with the Emergence of China*, Routledge Studies in the Growth Economies of Asia.

*Competitive trade relationship.* In contrast to a complementary trading relationship, a competitive trading relationship is driven by competitive RCA patterns where both the source country and the destination country have a comparative advantage in most of the products they are trading. The similarity in RCA profiles makes the two countries perfect competitors thus increasing the potential for a win-lose outcome, especially between Southern countries due the limited scope for product differentiation of their exports. Sans a preferential trading arrangement that may arise from close foreign relations, trade between countries with similar trade structures would be limited. Alternatively, the dismantling of trade barriers may significantly expand trade between developing country parties to a trade agreement, albeit with a high likelihood of win-lose outcomes.

*GVC-based trade relationship.* The increasing integration of the South into the regional and global value chains has contributed to the growing trade complementarity among Southern economies through vertical specialization.<sup>36</sup> Vertical specialization allows countries to participate in GVCs by specializing in one or more production stages or segments based on location-specific advantages. The RCA profiles of two countries with strong vertical intra-industry linkages tend to be similar, but the country that specializes in the high-end segment of the GVC would have a higher net export RCA. Although vertical intra-industry trade is found to have a greater impact on income per capita and productivity compared to inter-industry trade, the gains appear to be more significant for upper-middle and high-income countries.<sup>37</sup> Given the high sensitivity to cost of GVC-based trade, a GVC-based trade thrives between neighboring countries with a free trade agreement or strong investment ties.

*Emerging trade relationship.* The evolving trading relationship is driven by product categories in which the source country is gaining comparative advantage and the destination country is exhibiting deeper import specialization patterns thereby increasing the prospects of trade expansion. Trade in emerging sectors spawns a dynamic trade relationship and must therefore be exploited through aggressive trade and investment promotion strategies, especially if it is the exports of the smaller trading partner that are gaining comparing advantage.

### 3. State of the Philippines' Trading Relationship with Taiwan, China and the U.S.

During the first two years of the Duterte Administration, the Philippines' trade relationship with Taiwan, China and the U.S. have undergone evident shifts revealing an increasingly strong trade ties between the Philippines and China. The trade growth bias of the Philippines towards China is particularly strong on the import side and concurs with a weak growth performance of its imports with Taiwan and the U.S. The divergent growth trajectories of the trade of the Philippines with Taiwan,

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<sup>36</sup> P. Athukorala, (2011), South-South Trade: an Asian Perspective, *ADB, Economics Working Paper*, No. 265, Asian Development Bank.

<sup>37</sup> A. Ignatenko, F. Raei, and B. Mircheva, (2019, January 18), Global Value Chains: What are the Benefits and Why Do Countries Participate?, *IMF Working Paper No. 19/18*, <https://www.imf.org/en/Publications/WP/Issues/2019/01/18/Global-Value-Chains-What-are-the-Benefits-and-Why-Do-Countries-Participate-46505>



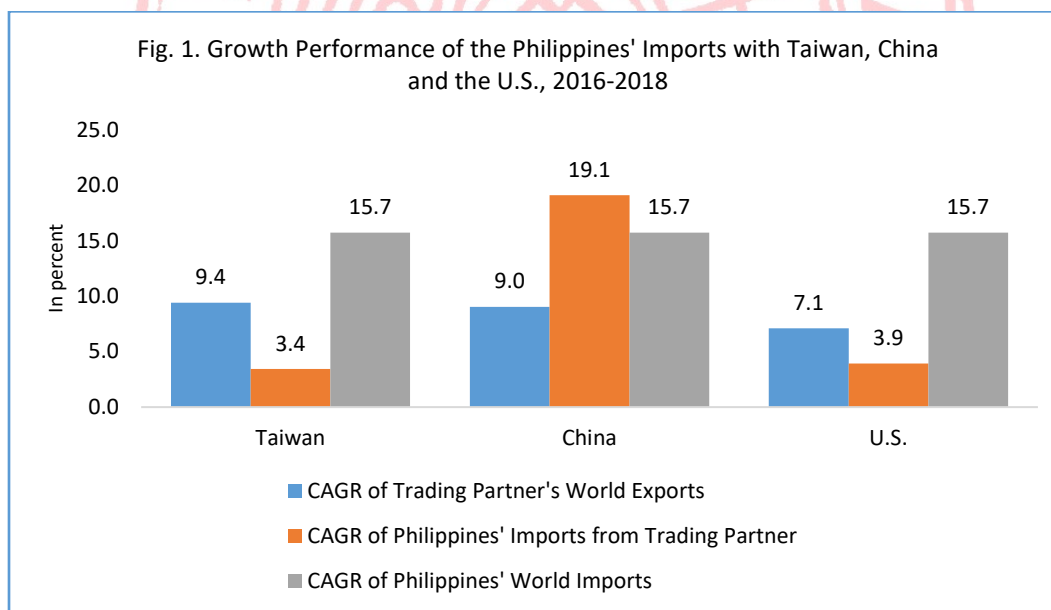
China, and the U.S. translates to further intensification of the country's trade with China and deintensification of its trade with Taiwan.

### 3.1. Trade Growth Dynamics of the Philippines

The trade growth dynamics of the Philippines has displayed a bias towards China. Both the Philippines' imports from and exports to China have exceeded the growth rates of their global exports and imports in stark contrast with the growth dynamics of the Philippines' trade with Taiwan and, to a lesser extent, with the U.S.

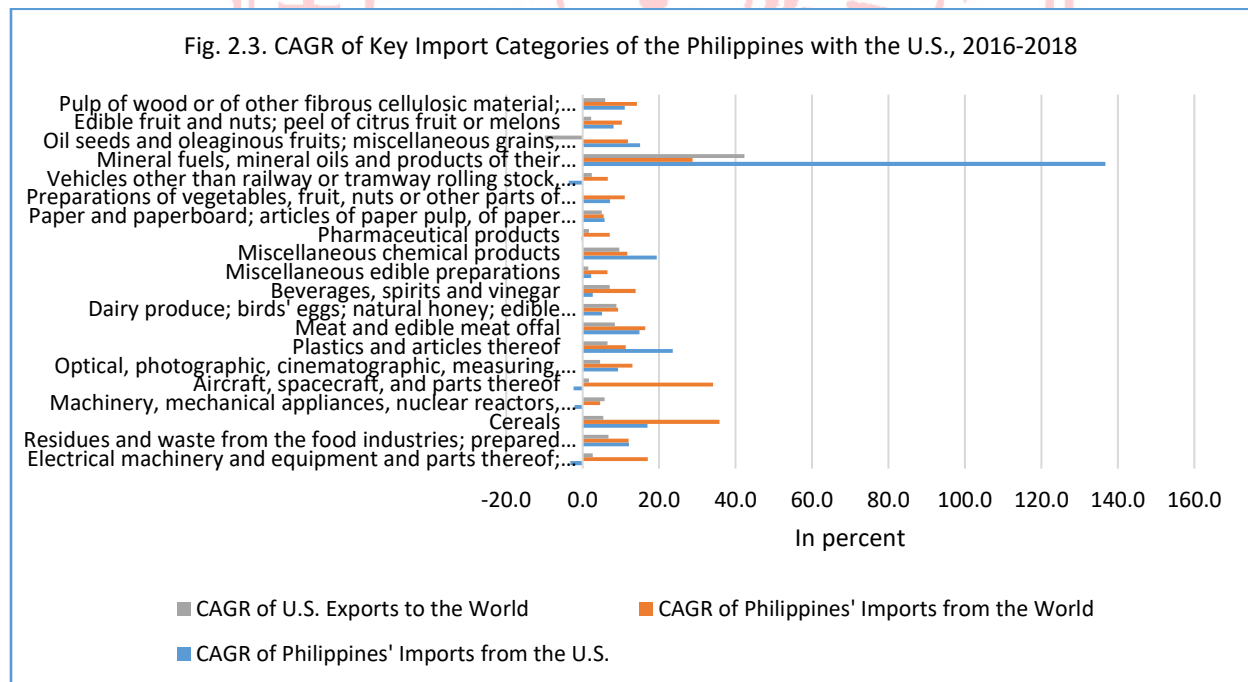
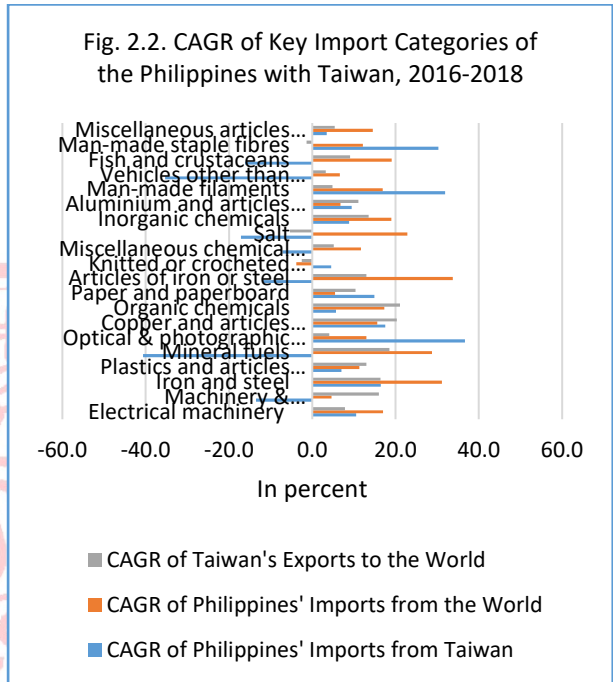
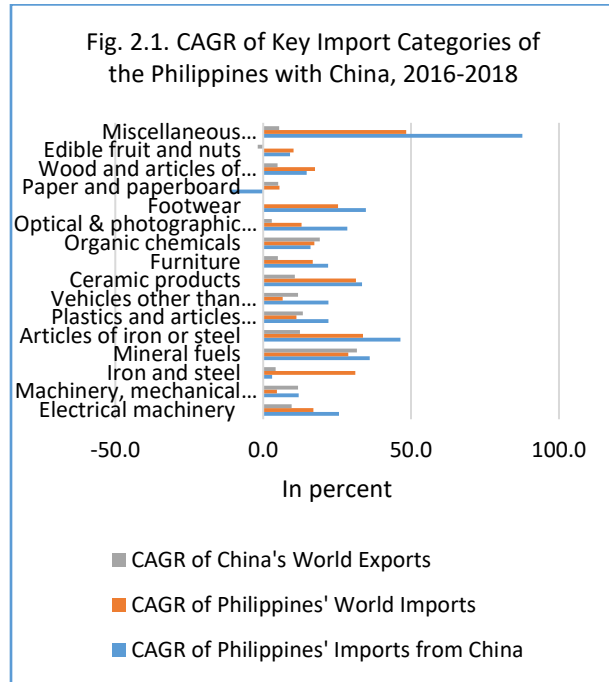
#### 3.1.1. Import Growth Dynamics

The imports of the Philippines from China has recorded a staggering compound annual growth rate (CAGR) of 19 percent, about five times that of the Philippines' imports with Taiwan and the U.S. The growth gaps in the Philippines' imports with the three countries are substantially higher than the growth differentials of the global exports of these three countries hinting at the country's special bilateral trade growth dynamics. The growth rate of the world's imports with Taiwan's is slightly higher than the growth rates of the world's imports with China and the U.S. in contrast with the growth rate of the Philippines' imports with Taiwan, which is lower by nearly 16 percentage points and less than a percentage point than its imports with China and the U.S., respectively.



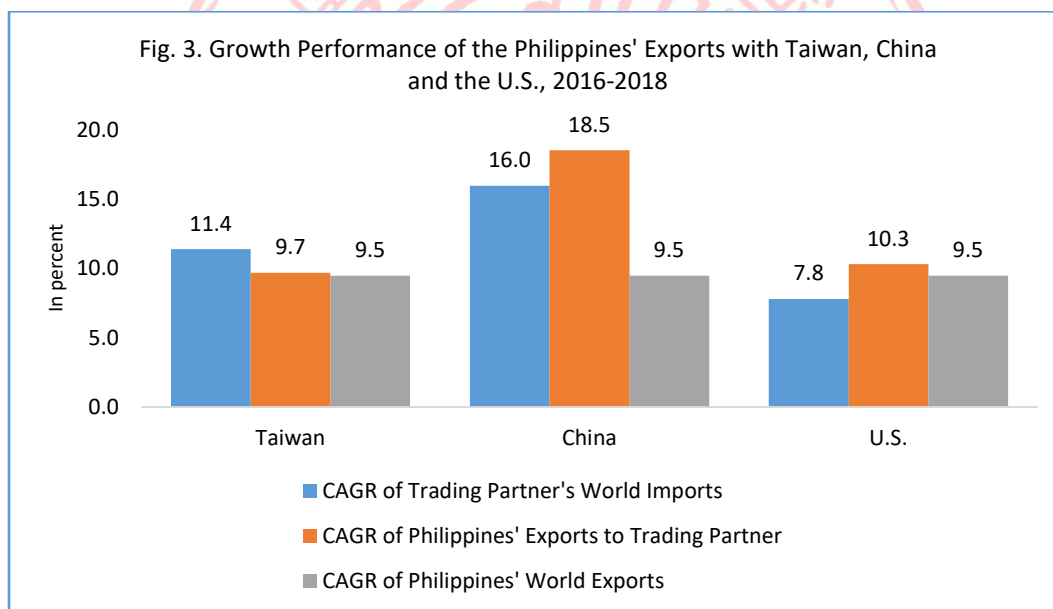
The China-bias import growth dynamics of the Philippines is evident in miscellaneous manufactured articles, aircraft, copper, organic chemicals, inorganic chemicals, and edible fruits. The weak growth performance of the Philippines' imports with Taiwan is observed in machinery and mechanical appliances, mineral fuels, articles of iron and steel, salt, sulphur and pebbles, fish and crustaceans, and vehicles which is partially offset by the strong growth performance of optical equipment, man-made filaments, and man-made staple fibers. The lackluster growth performance of the Philippines'

imports with the U.S. is manifest in aircraft, electrical machinery, vehicles, machinery and mechanical appliances, while mineral fuels, plastics, and miscellaneous chemical products have yielded strong growth figures.



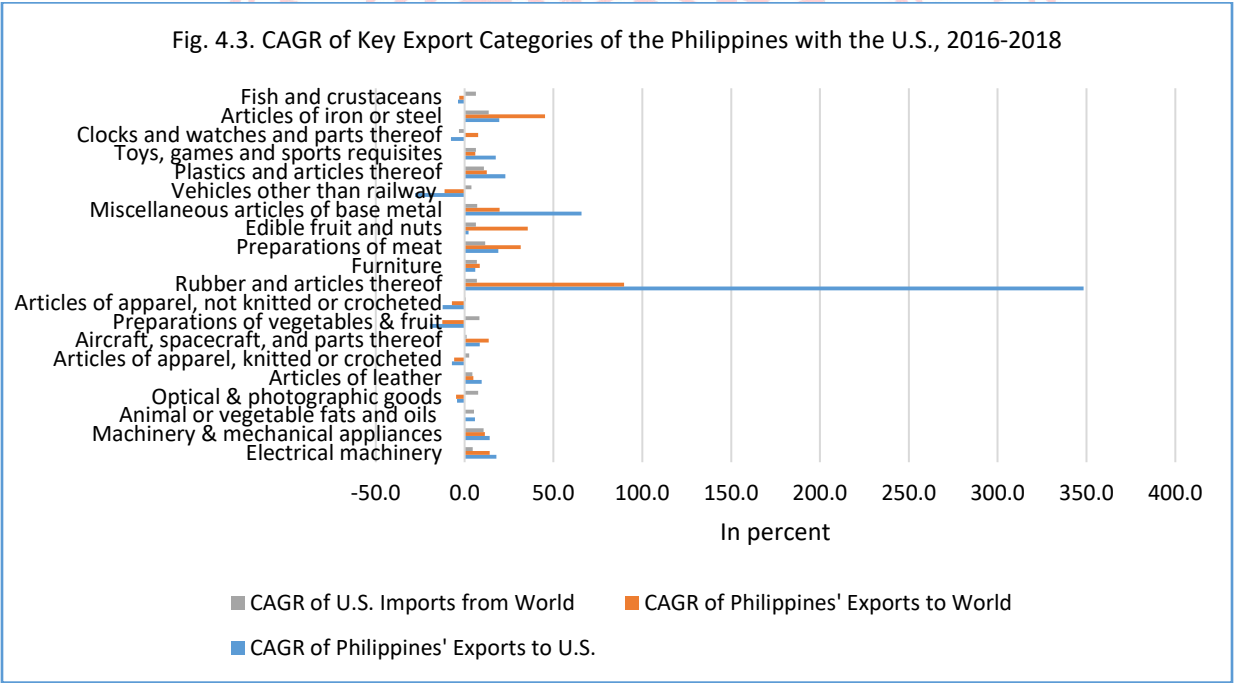
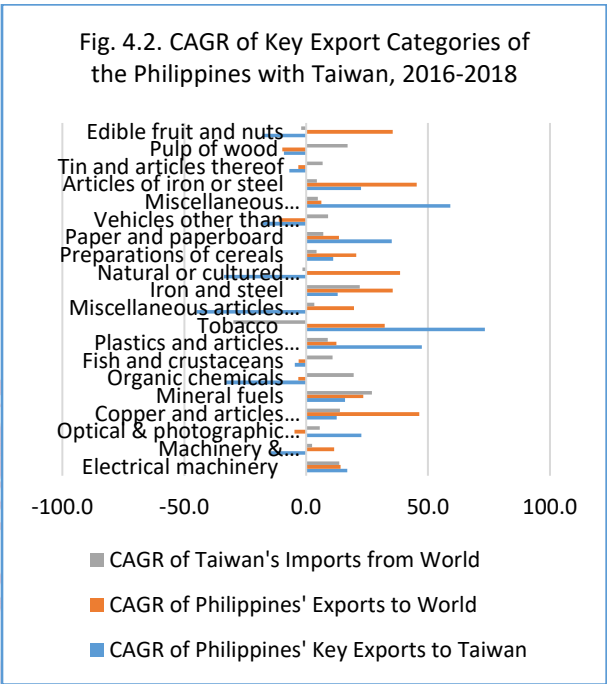
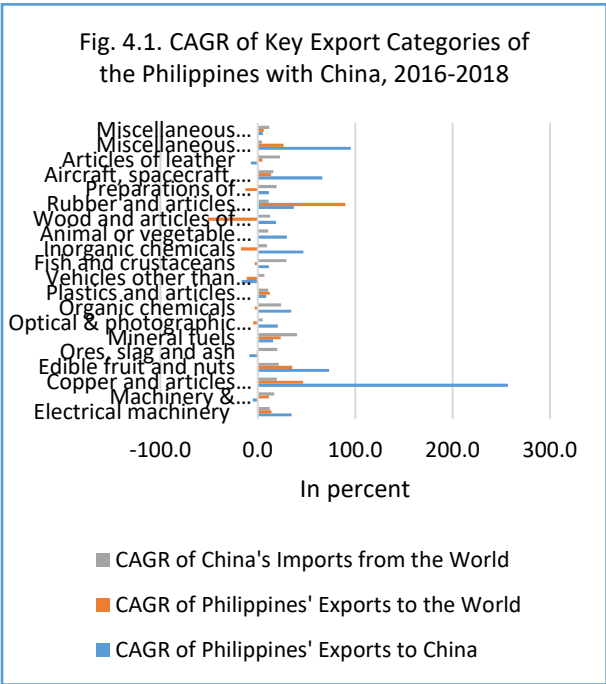
### 3.1.2. Export Growth Dynamics

The exports of the Philippines have exhibited a relatively weak growth bias towards China. The growth differentials in the Philippines' exports with Taiwan, China and the U.S. weakly reflect the growth disparity in the world's exports with the three countries. The growth differentials in the Philippines' exports with Taiwan, China and U.S. and the three countries' imports from the world is relatively narrow, albeit still substantial, especially with respect to the Philippines' exports with Taiwan and China. China's imports with the world have expanded by 16 percent, higher by nearly five percentage points and over eight percentage points than the imports of Taiwan and the U.S. with the world, respectively, while the growth rate of the Philippines' exports with China is higher by eight percentage points than the growth rates of the country's exports with Taiwan and the U.S. Taiwan's imports from the world have posted a higher growth rate than the Philippines' exports to Taiwan, reflecting Taiwan's active engagement with other import partners. In contrast, the growth rate of the Philippines' exports with the U.S. and China is significantly higher than the growth rates of the two countries' global imports signifying a mutual inclination to further engage each other as trading partners.



The slight bias in the export growth dynamics of the Philippines towards China is highly evident in miscellaneous manufactured articles, optical equipment, articles of iron and steel, and electrical machinery which is partially offset by the weak growth performance of iron and steel, organic chemicals, and wood products. The anemic growth performance of Philippines' exports to Taiwan is reflected in machinery and mechanical appliances, organic chemicals, miscellaneous articles of base metal, natural or cultured pearls, vehicles, and edible fruits. Rubber and miscellaneous articles of base metal are two key export categories of the Philippines with the U.S. that have churned out strong growth figures, while articles of apparel, preparations of vegetables and fruits and vehicles have performed poorly.





*3.1.3. Trade Growth Performance with Other Trading Partners*

Notwithstanding the strong trade growth bias of the Philippines towards China, the Herfindahl-Hirschman (HHI) index indicates a slight reduction in the degree of concentration of the Philippines' export markets and import suppliers. Aside from China, the Philippines' trade with South Korea, ASEAN and European countries have also exhibited a strong growth performance. The Philippines'

trade with South Korea has expanded by 35 percent nearly twice the growth rate of the country's trade with China. Likewise, the growth rates of the Philippines' trade with Vietnam, France and Indonesia have also exceeded its trade with China. Relative to the Philippines, however, Taiwan, China, and the U.S. have been more aggressive in engaging other trading partners. Taiwan has exhibited deepening import ties with resource-rich countries, such as Russia, United Arab Emirates, Malaysia and Australia. Taiwan's trade with China, its largest export market and import supplier, has further expanded with its exports to China posting the second highest growth rate among its ten largest export partners. China, on the other hand, is establishing stronger import ties with Russia, Brazil and Vietnam, while the U.S. has dramatically expanded its trade with countries across the globe, particularly India, Netherlands and Brazil. U.S. trade with Taiwan has also improved significantly. South Korea and Brazil are the fastest expanding export markets of the US, while Ireland is its fastest growing import supplier. U.S. exports with Japan and United Kingdom have also performed strongly.

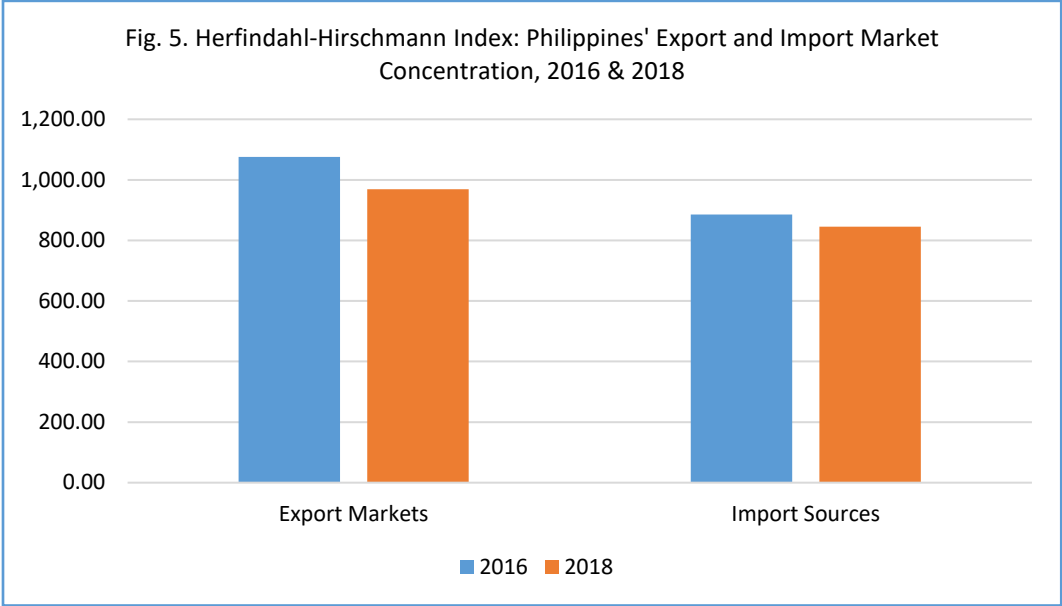


Fig. 6.1. CAGR of the Philippines' Exports with Key Export Markets, 2016-2018

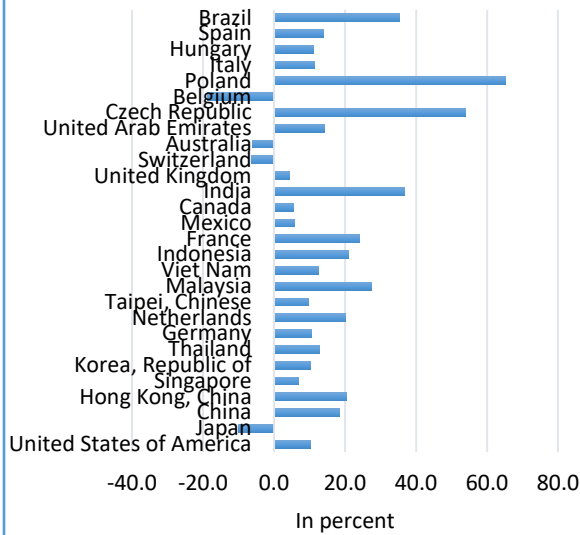


Fig. 6.2. CAGR of the Philippines' Imports with Key Import Sources, 2016-2018

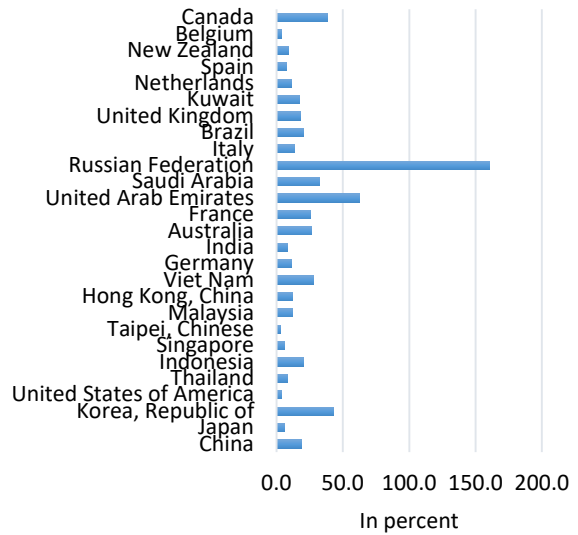


Fig. 7.1. CAGR of China's Exports with Key Export Markets

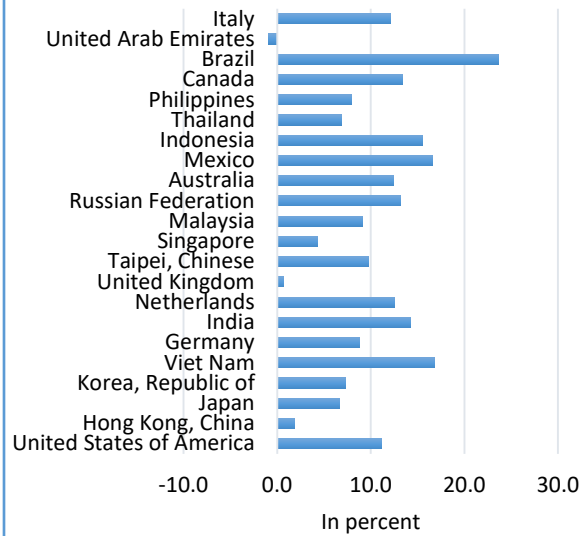


Fig. 7.2. CAGR of China's Imports with Key Import Suppliers, 2016-2018

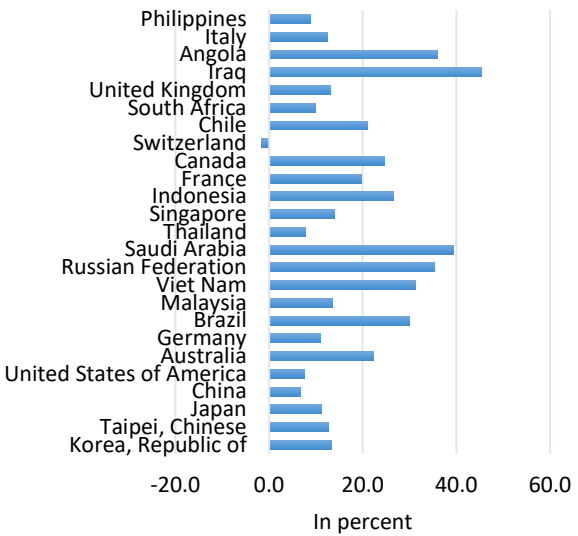


Fig. 8.1. CAGR of Taiwan's Exports with Key Export Markets, 2016-2018

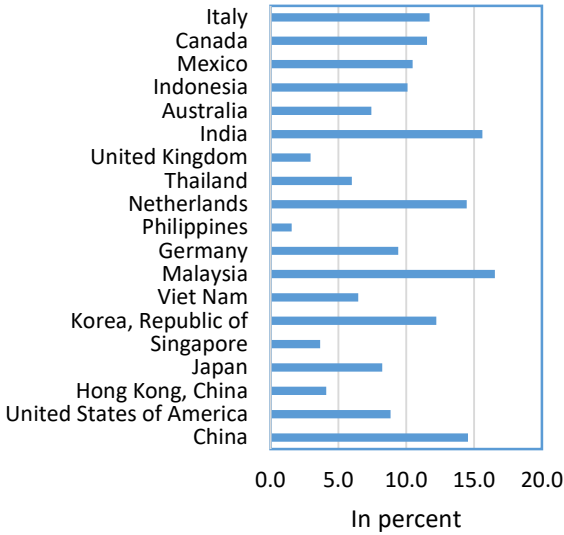


Fig. 8.2. CAGR of Taiwan's Imports with Key Import Sources, 2016-2018

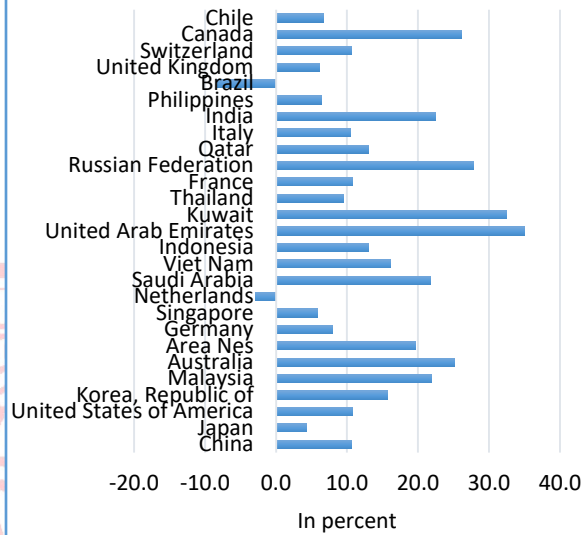


Fig. 9.1. CAGR of U.S. Exports with Key Export Markets, 2016-2018

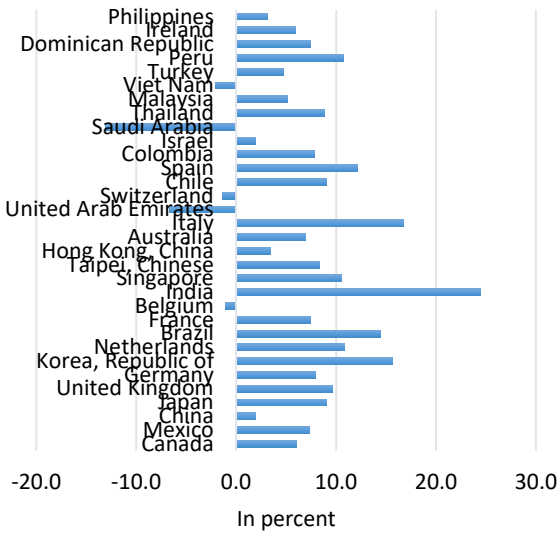
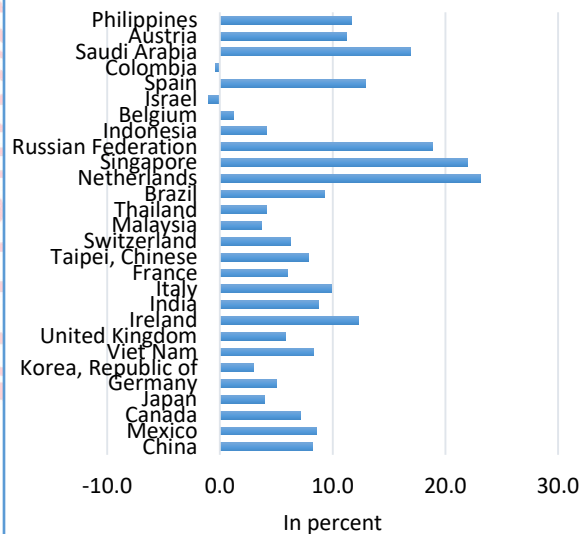


Fig. 9.2. CAGR of U.S. Imports with Key Import Sources, 2016-2018



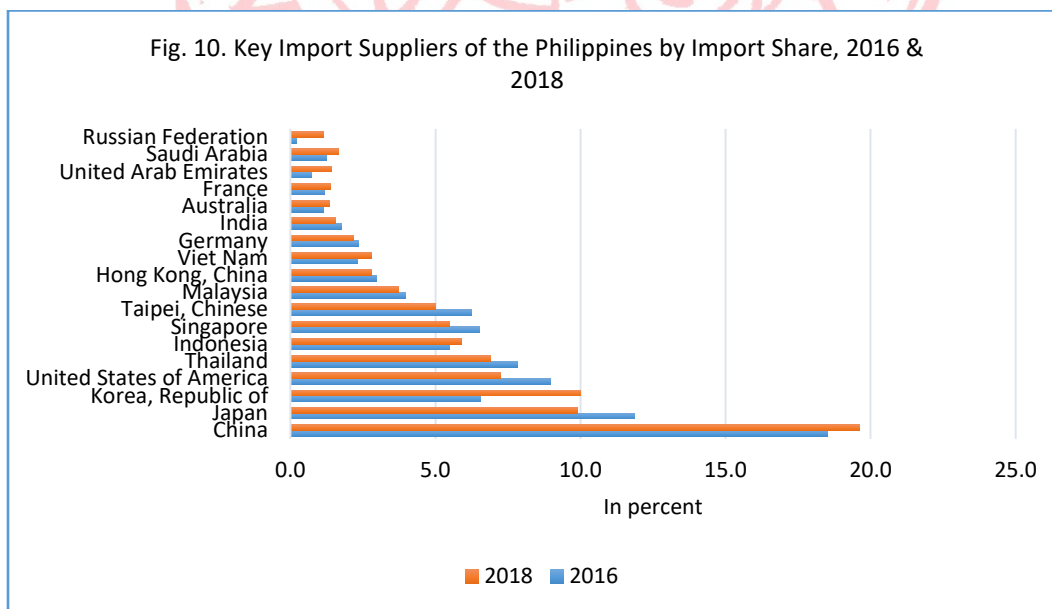


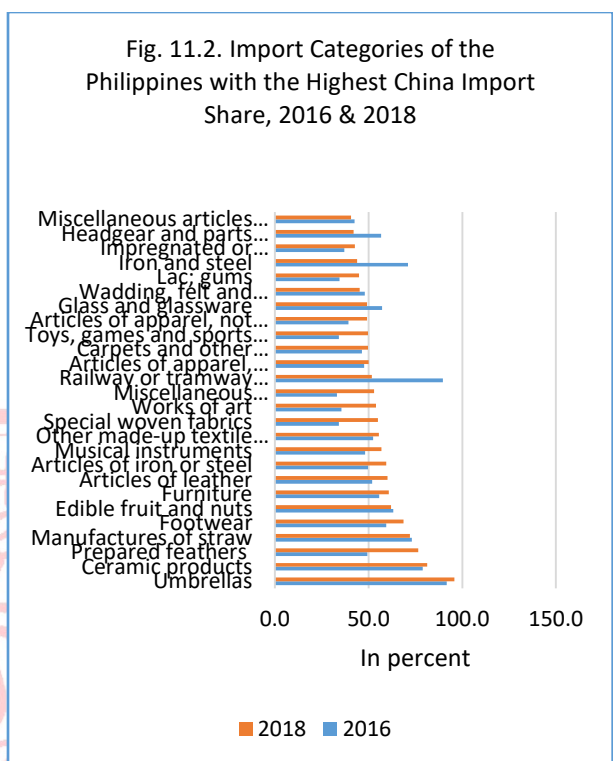
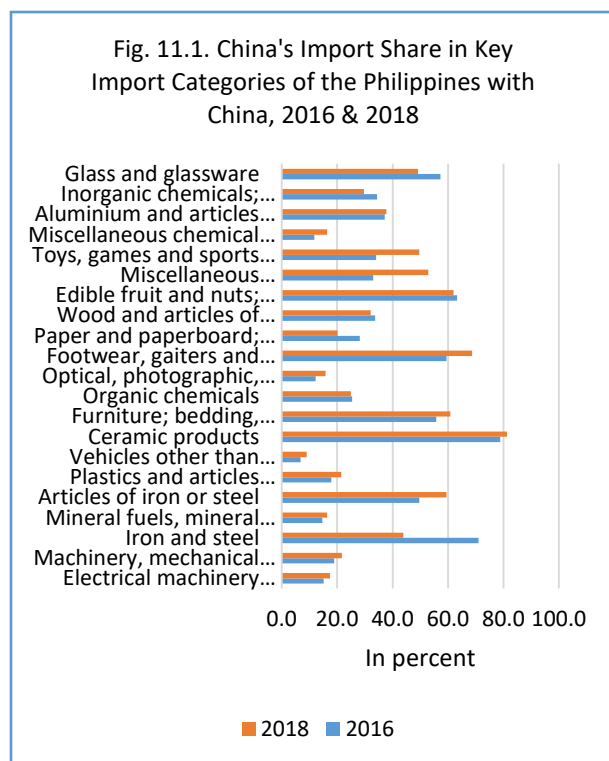
### 3.2. Shifts in the Relative Dominance of China, U.S. and Taiwan

The strong growth performance of the Philippines' trade with China has cemented the latter's position as the former's largest trading partner, further dominating the country's trade in concurrence with the sharp decline in the import shares of Taiwan and the U.S., a slight increase in the export share of the U.S. and an insignificant change in the export share of Taiwan.

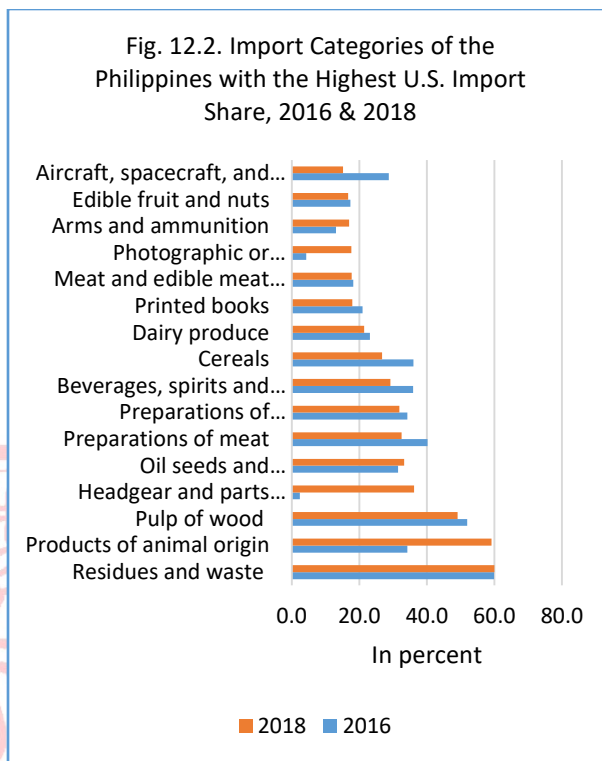
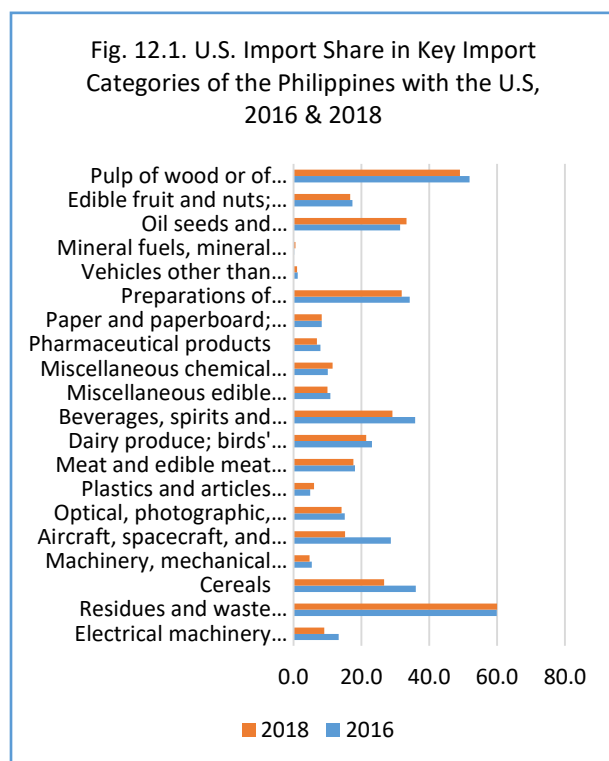
#### 3.2.1. Relative Import Dominance of China, U.S. and Taiwan

In 2018, China supplies nearly a fifth of the Philippines' imports, a percentage point higher than in 2016, further widening the gap in the import shares of China and Japan, the Philippines' second largest source of imports. China is the dominant import supplier of the Philippines in light manufactures and a few resource-based products. Over half of the Philippines' imports are sourced from China in the following product categories: umbrellas (96%), ceramic products (81%), prepared feathers (76%), manufactures of straw (72%), footwear (69%), furniture (61%), and articles of iron and steel (59%). The slight rise in the China's share to the Philippines' imports can be attributed to six key import categories: special woven fabrics, miscellaneous manufactured articles, work of art, toys and games, products of the milling industry, and lac and gums. China, however, has experienced a significant drop in its import share in a few strategic sectors, albeit it remains the country's top import supplier in these product categories. The highest drop in China's import share is recorded by railway followed by iron and steel and silk. China's share in railway has dropped to 52 percent from 90 percent consequent on the negative growth rate of the Philippines' imports of railway from China as the Philippines imports more railway from Japan and Malaysia. Likewise, China's import share in iron and steel has plummeted to 44 percent from 70 percent as the Philippines imports more from Russia and Japan. The sharp drop in China's import share in silk from 35 percent to 21 percent has ensued on the back of a staggering increase in the Philippines' imports of silk from Hong-Kong.

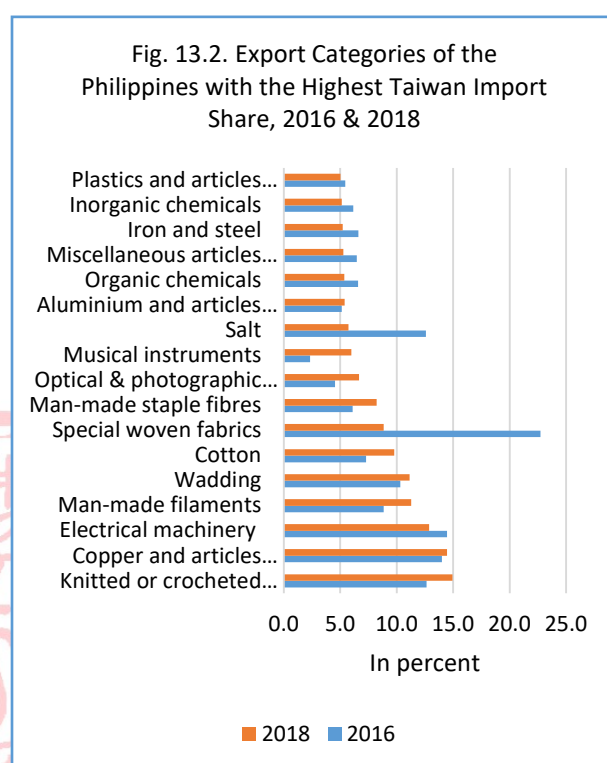
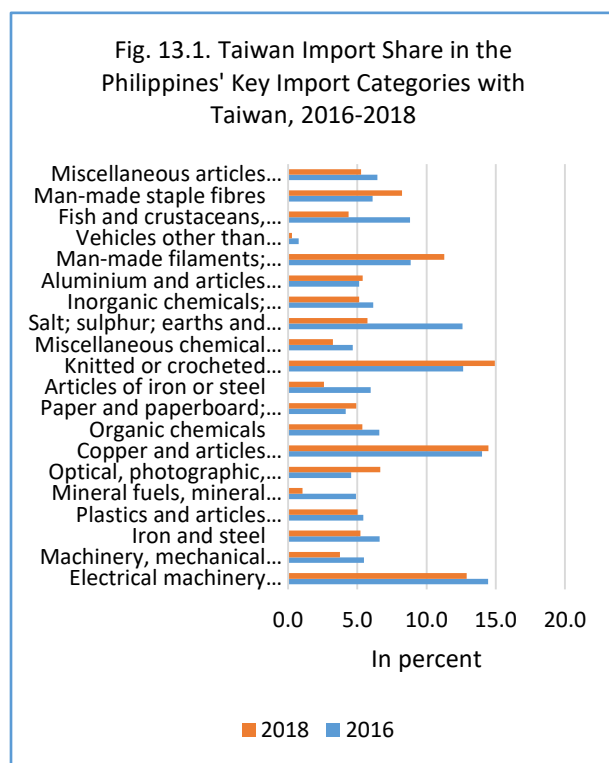




The U.S. has posted the second largest decline in import share in the Philippines' imports, making it the country's fourth largest import supplier, down by one place, supplying seven percent of the Philippines' imports, down by two percentage points. The U.S., however, continues to dominate the Philippines' imports of agricultural products and a few consumer products, such as residues and waste (60%), products of animal origin (59%), pulp of wood (49%), headgear (36%), preparations of meat (33%), preparations of vegetables (32%), beverages (29%), cereals (27%) and dairy produce (21%). The decline in the U.S import share in the Philippines' imports is evident in electrical machinery, cereals and aircraft. U.S. bilateral import share in aircraft is nearly halved to 15 percent in 2018 from 29 percent in 2016, while its import share in cereals has dropped to 27 percent in 2018 from 36 percent in 2018. U.S. bilateral import share in electrical machinery is down by four percentage points perching at nine percent in 2018. The U.S., however, has increased its dominance in products of animal origin, headgear and photographic and cinematographic equipment.



Despite recording the third largest decline in bilateral import share in Philippine imports, Taiwan has remained the eight largest import supplier of the Philippines, representing five percent of the country's imports. Taiwan has remained a key import supplier of the Philippines in medium-and high-technology goods and a few light manufactures, such as knitted or crocheted fabrics (15%), copper (14%), electrical machinery (13%), man-made filaments (12%) and wadding (11%). The drop in Taiwan's bilateral import share is observed in seven key import categories (i.e., electrical machinery, machinery and mechanical appliance, plastics, mineral fuels, copper, organic chemicals, and articles of iron and steel) with the largest decline posted by articles of iron and steel and mineral fuels. Overall, arms and ammunition have recorded the largest fall in Taiwan's import share followed by special woven fabrics, nickel and works of art. In 2018, Taiwan accounts for only two percent of the Philippines' imports of arms and ammunition compared to 45 percent in 2016 as the latter diversifies its source to include the U.S., Israel, Korea, Brazil, China and Turkey. Taiwan's share to the Philippines' imports of special woven fabrics has declined by 11 percentage points. Taiwan is the Philippines' third largest supplier of special woven fabrics, albeit its share is significantly smaller than that of China and Hong Kong. Taiwan, however, has become a more significant import supplier of the Philippines in knitted or crocheted fabric, optical equipment, man-made staple fiber, man-made filaments, live trees, tobacco, and musical instruments.



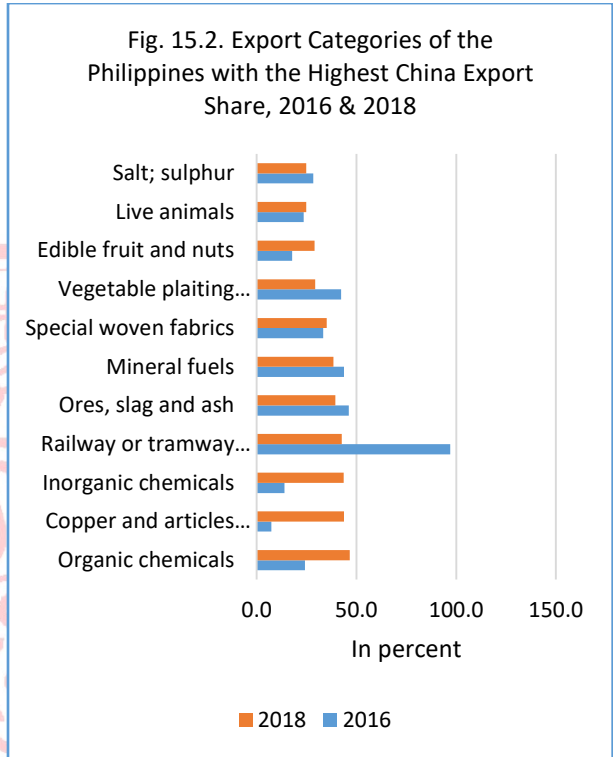
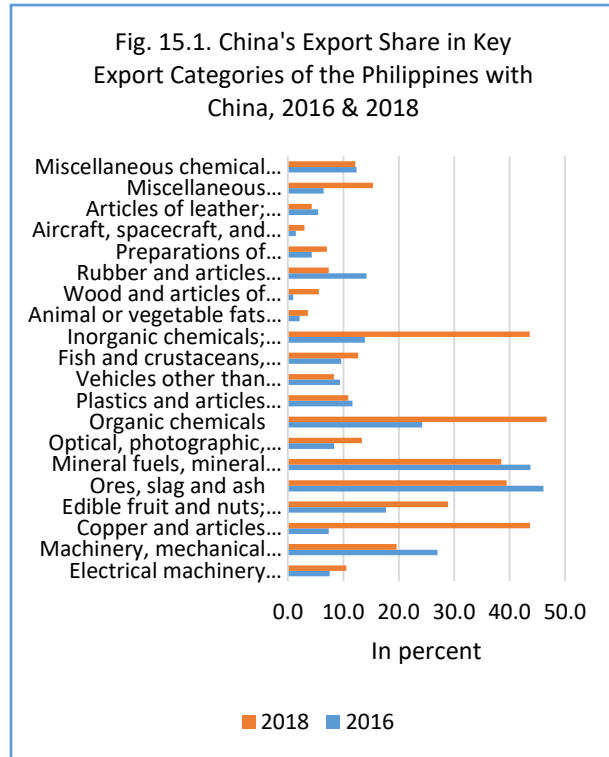
### 3.2.2. Relative Export Dominance of China, U.S. and Taiwan

The relative importance of Taiwan, China, and the U.S. as export partners of the Philippines has not significantly changed, but there are wide variations across product categories. The U.S. has maintained its position as the Philippines' largest export market, accounting for roughly 16 percent of the country's exports, slightly higher than in 2016, followed by Hong Kong, Japan, and China. Low-technology manufactures, particularly man-made filaments (86%), arms and ammunitions (82%), silk (66%), articles of apparel (65%), manufactures of straw (65%), articles of leather (65%) and articles of apparel, not knitted (63%) and wool (60%) account for the bulk of the Philippines' exports to the U.S. Notwithstanding the persistently strong export relations of the Philippines with the U.S., however, the export share of the U.S. has declined in a wide mx of product categories, such as aircraft, arms and ammunitions, animal or vegetable fats and oil, sugars, preparations of vegetable, preparations of meat, articles of knitted articles of apparel, musical instruments, clocks, and other base metals. The drop in U.S. export share in these product categories is compensated by the marked increase in its. export share in man-made filaments, silk, rubber, miscellaneous articles of base metal, printed books, carpets, manufactures of straw. U.S. export share in man-made filaments has increased to 87 percent from 65 percent, while its export share in silk rose to 75 percent from 39 percent. US export share in rubber has also sharply increased to 30 percent in 2018 from 6 percent in 2016.

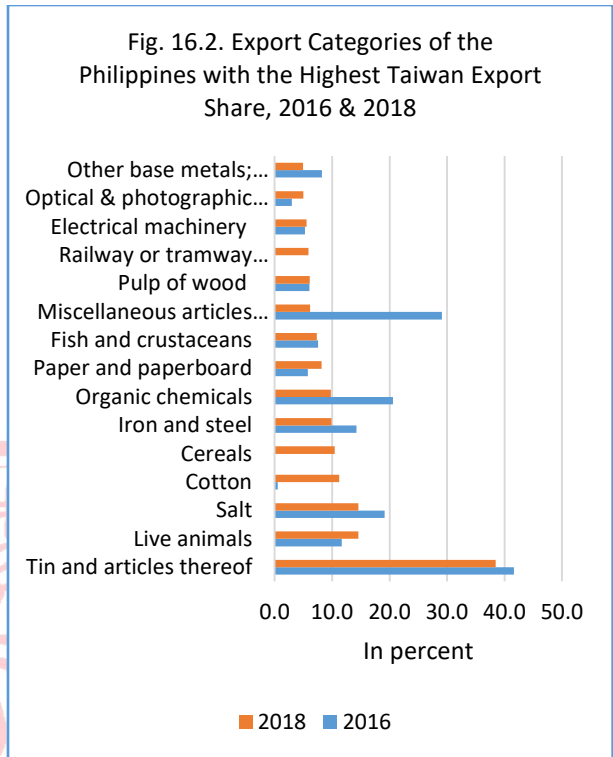
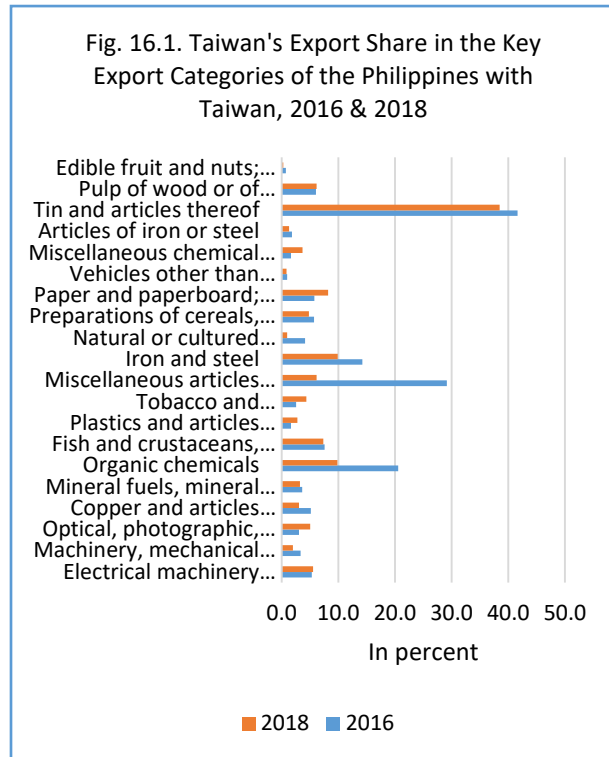




essential oils, raw hides and oilseeds., but it is more than offset by the sharp increase in its export share in intermediate goods (e.g., inorganic chemicals, copper and organic chemicals) and primary goods (e.g., residues and wastes and edible fruits), and a modest improvement in its export share in electrical machinery.

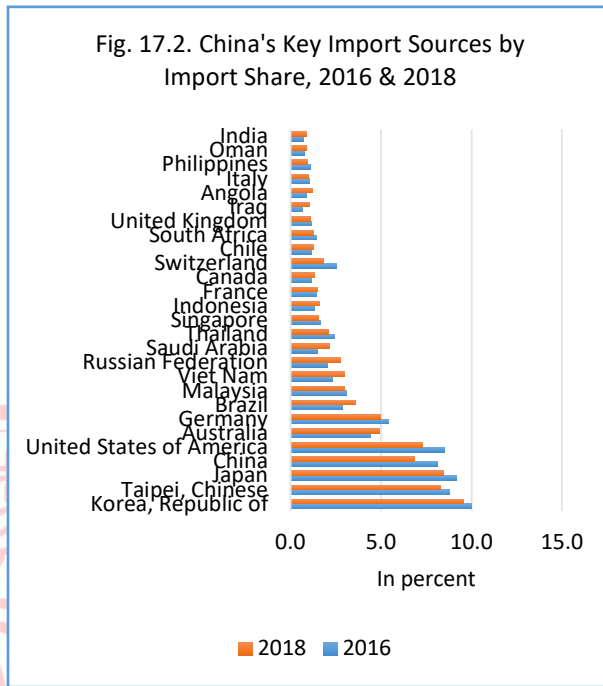
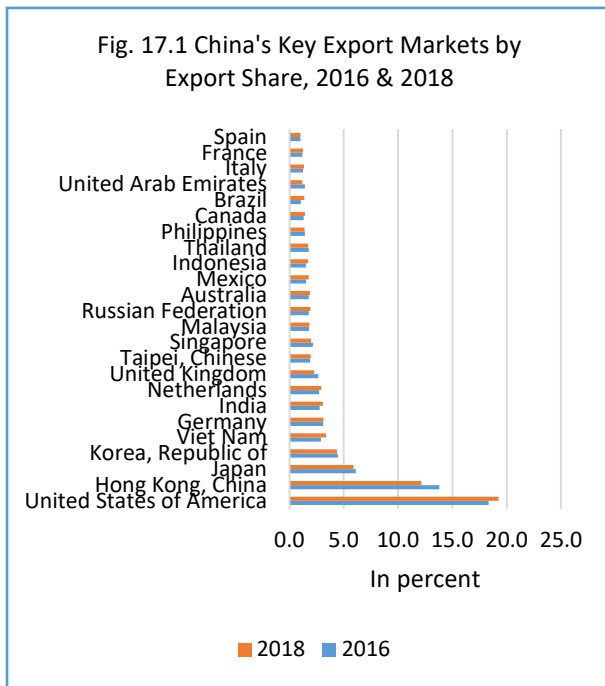


Taiwan's share in Philippine exports, on the other hand, has steadied at four percent, making it its 10<sup>th</sup> largest export market, down by one place. Taiwan is a significant export market of the Philippines in a few primary goods, such as tin (38%), live animals (15%), salt (15%), cotton (11%) and cereals (10%). Taiwan, however, has recorded a substantial drop in its export share in organic chemicals and miscellaneous articles of base metal which is partially offset by the rise in its export share in agricultural products (e.g., cotton, vegetable plaiting materials, and cereals) and railway.



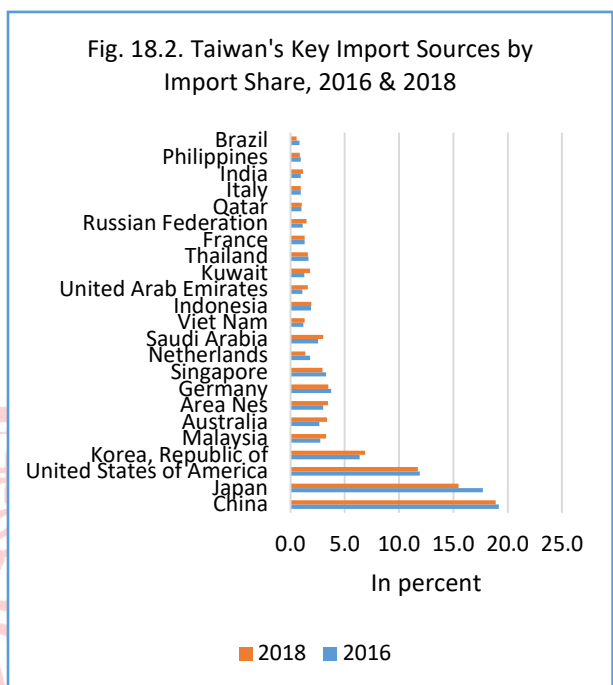
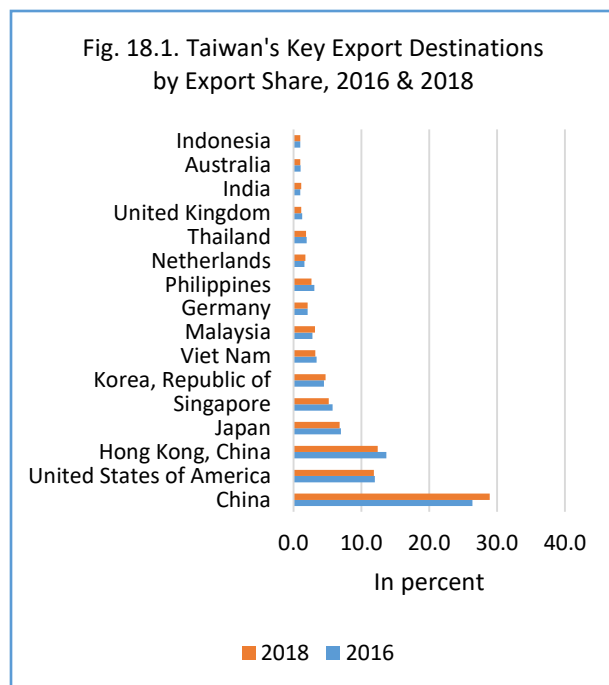
### 3.2.3. Philippines' Relative Trade Dominance

Reflecting the burgeoning disparity in the exporting capacities of the Philippines and its three key trading partners, the Philippines has become an increasingly insignificant trading partner to the three countries, particularly to China. While China is the Philippines' largest trading partner, the Philippines is China's 23<sup>rd</sup> largest trading partner, down by three places from 2016, representing a measly 1.2 percent of China's trade, slightly lower than in 2016, overtaken by Canada, Mexico and Saudi Arabia. The Philippines' is the 26<sup>th</sup> largest import supplier of China, four notches lower than in 2016, supplying one percent of its imports, lower than in 2016. The Philippines, however, has shown to be a stable export market for China, maintaining its ranking as 19<sup>th</sup> largest export market, absorbing over a percent of its exports, about the same as in 2016.

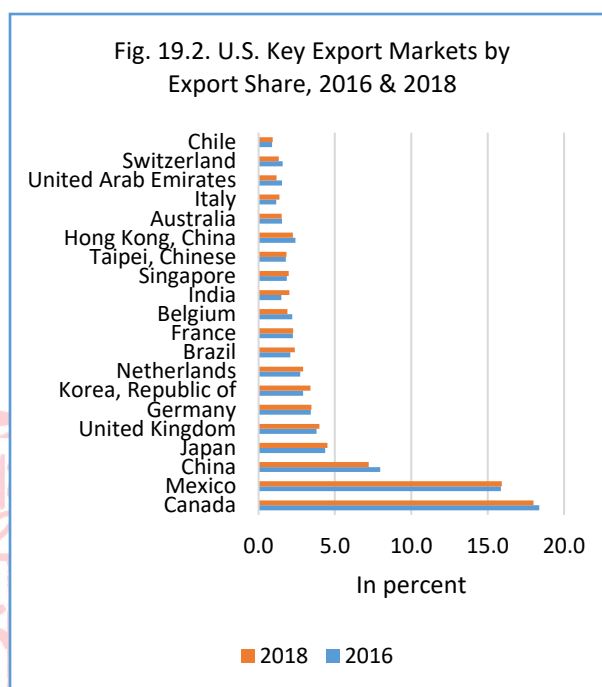
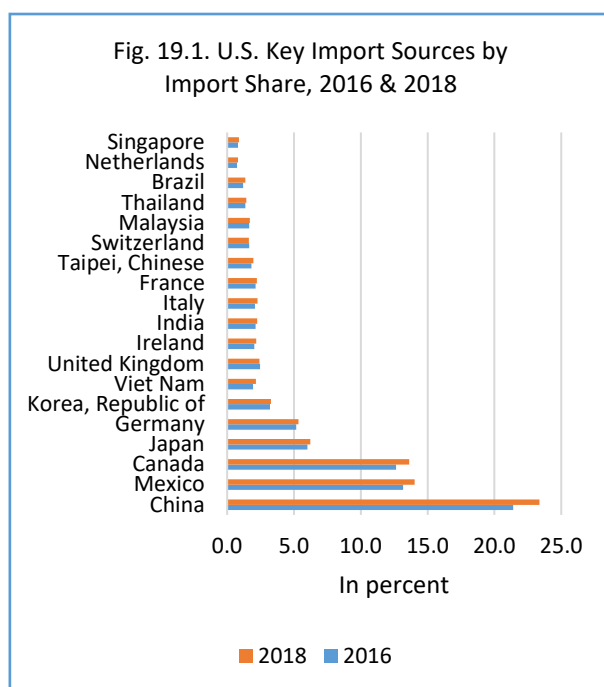


Although the Philippines' trade with Taiwan has posted an anemic growth rate, there is no significant change in the Philippines' share to Taiwan's trade indicating that other key trading partners of Taiwan have also performed poorly. The Philippines is the 11<sup>th</sup> largest trading partner of Taiwan, down by one place, representing less than two percent of Taiwan's trade. The Philippines' share in Taiwan's trade has recorded the fourth largest decline next to Japan, Hong Kong and Singapore. The Philippines is Taiwan's 9<sup>th</sup> largest export market, a notch lower than in 2016, while it has remained the 22<sup>nd</sup> largest import supplier of Taiwan.





As regards its importance as a trading partner to the U.S., the Philippines accounted for less than a percent of the U.S. exports and imports, about the same as in 2016. Unlike the Philippines' trade relations with Taiwan and China, the Philippines is more significant as an import supplier than as an export market to the U.S. The Philippines is the U.S. 29<sup>th</sup> largest import supplier, the same as in 2016, and 33<sup>rd</sup> largest export market, down by two places. The importance of the Philippines as an import supplier to the U.S. has significantly declined as China further dominates U.S. imports. China, the U.S. largest import supplier, has posted the largest increase in bilateral import share, but China's importance as an export market to the U. S. has declined as shares of other major export markets, particularly South Korea, Mexico, Japan, Netherlands, United Kingdom, Brazil, and Germany has increased.



### 3.3. Trade Intensity of the Philippines with China, Taiwan and the U.S.

The Philippines' trade intensities with China, Taiwan, and the U.S. have displayed contrasting dynamics characterized by the Philippines' growing integration with China in concurrence with the gradual trade distancing of the country with Taiwan and, to a limited extent, with the U.S.

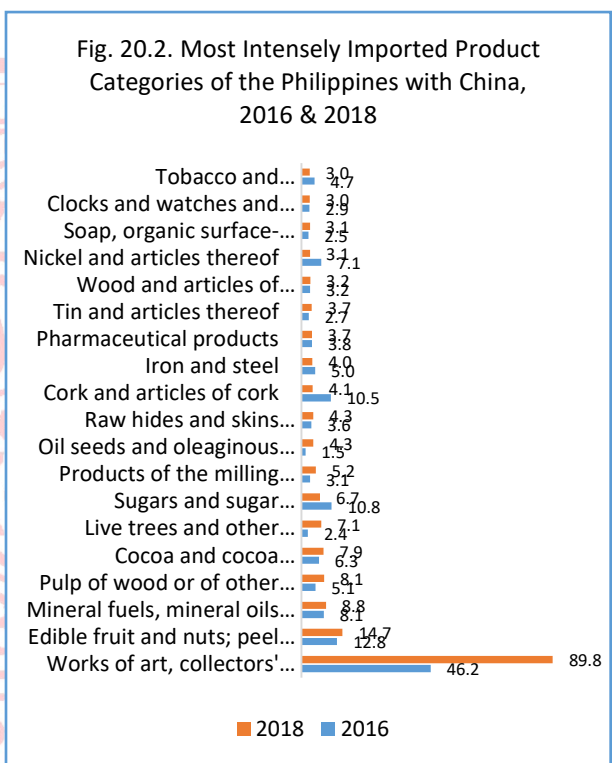
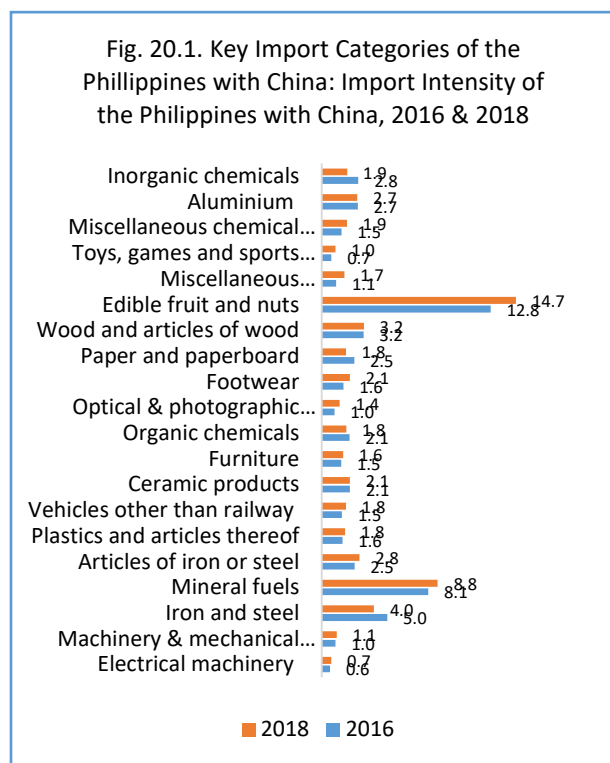
Trading Partner	Trade Intensity of the Taiwan, China, and the U.S. with the Philippines				Trade Intensity of the Philippines with Taiwan, China, and the U.S.			
	Export Intensity		Import Intensity		Export Intensity		Import Intensity	
	2016	2018	2016	2018	2016	2018	2016	2018
Taiwan	5.8	4.6	2.7	2.5	2.6	2.4	3.5	2.9
China	2.7	2.4	3.1	2.8	1.1	1.2	1.4	1.5
U.S.	1.0	0.9	1.3	1.4	1.1	1.2	1.0	0.8

Raw Data Source: ITC; Author's computation at 4-digit HS Code

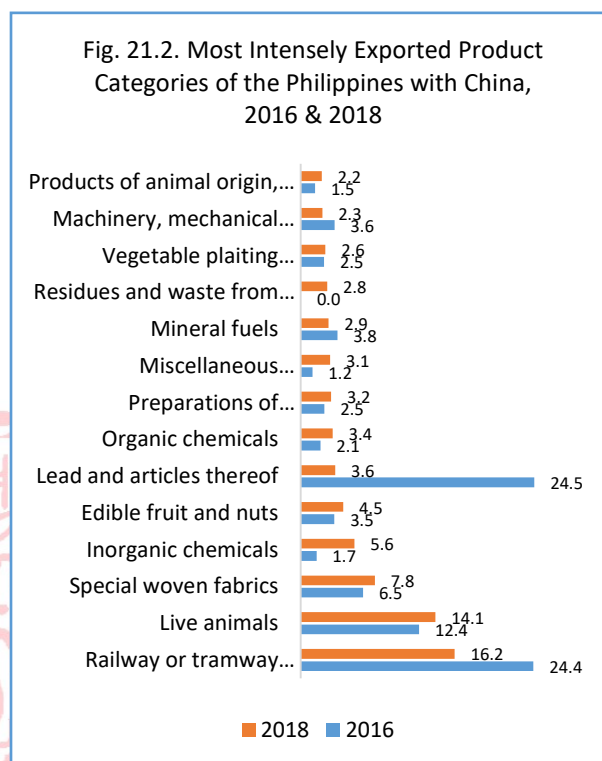
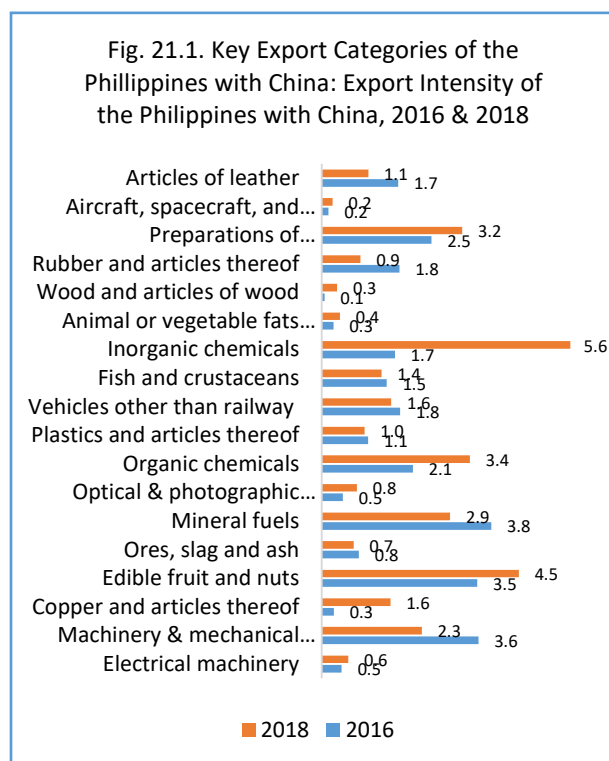
#### 3.3.1. Trade Intensity with China

With the China-bias trade growth dynamics of the Philippines, the country's trade with China further intensifies and vice-versa. China's trade intensity index with the Philippines is higher than vice versa meaning China is trading with the Philippines a lot more relative to the latter's importance in global trade than vice-versa, facilitating a faster trade integration of the Philippines with China. The growing trade integration of the Philippines with China is characterized by a more intense import relations than export relations.

The Philippines maintains intense import relations with China in several agricultural products (i.e., edible fruits, pulp of wood, cocoa and cocoa preparations, live trees, products of the milling industry, oilseeds, and wood and articles of wood), and intermediate goods (i.e., iron and steel, articles of iron and steel, inorganic chemicals, and aluminum). The Philippines also has high import intensity with China in pharmaceutical products. The increase in the import intensity index of the Philippines with China is reflected in most of the key import categories of the Philippines with China, especially, edible fruits, articles of iron and steel, and vehicles. But the Philippines' import intensity index with China in iron and steel has plummeted.



The Philippines maintains intense export relations with China in a wide range of product categories, such as edible fruits, organic chemicals, mineral fuels, machinery and mechanical appliances, railway, umbrellas, and essential oils. The slight increase in the Philippines' export intensity with China is reflected in majority of the key export categories of the Philippines with China including some intermediate goods and agricultural products (i.e., edible fruits, wood and wood articles, animal or vegetable fats and oil, inorganic chemicals, organic chemicals and articles of iron and steel). There is, however, a decline in the Philippines' export intensity with China in a few important export categories, such as vehicles, machinery and mechanical appliances, mineral fuels, umbrellas, essential oils, railway and lead, among others.

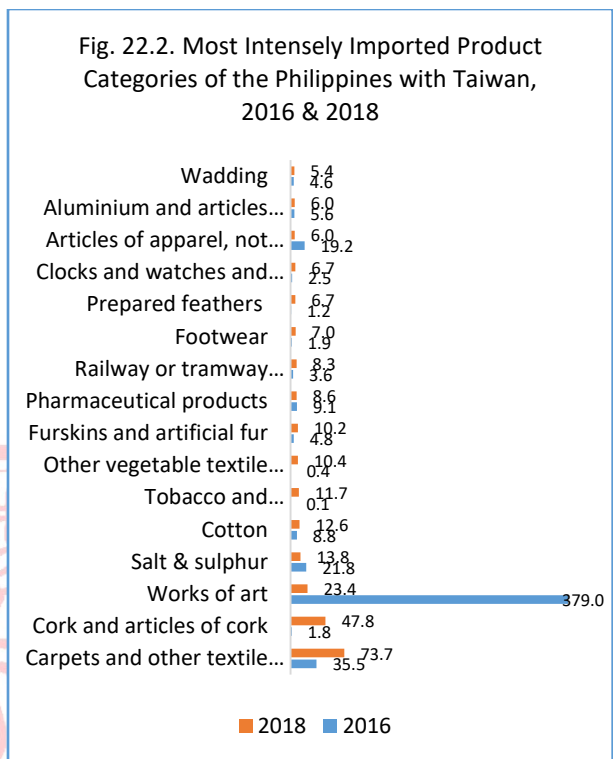
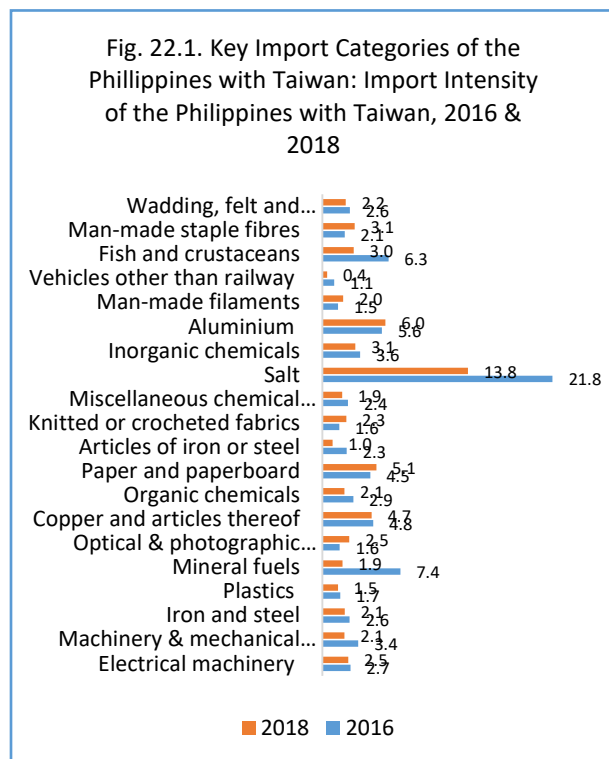


### 3.3.2. Trade Intensity with Taiwan

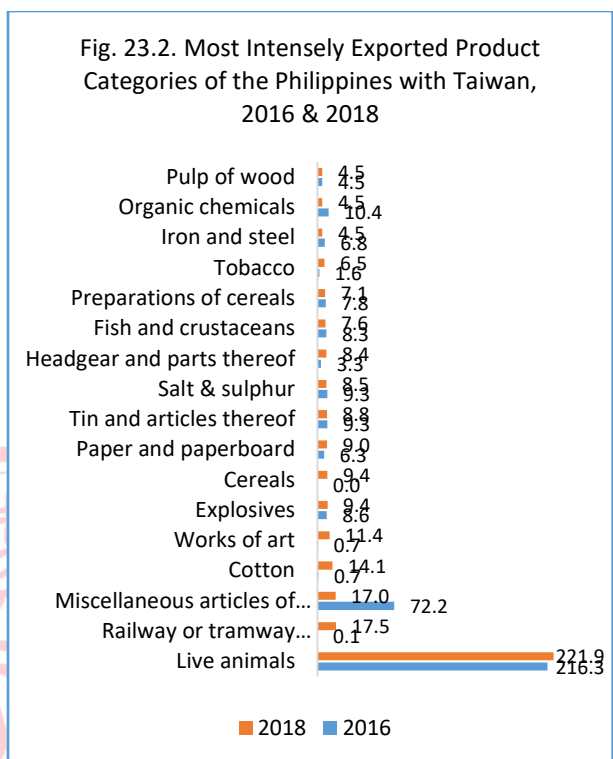
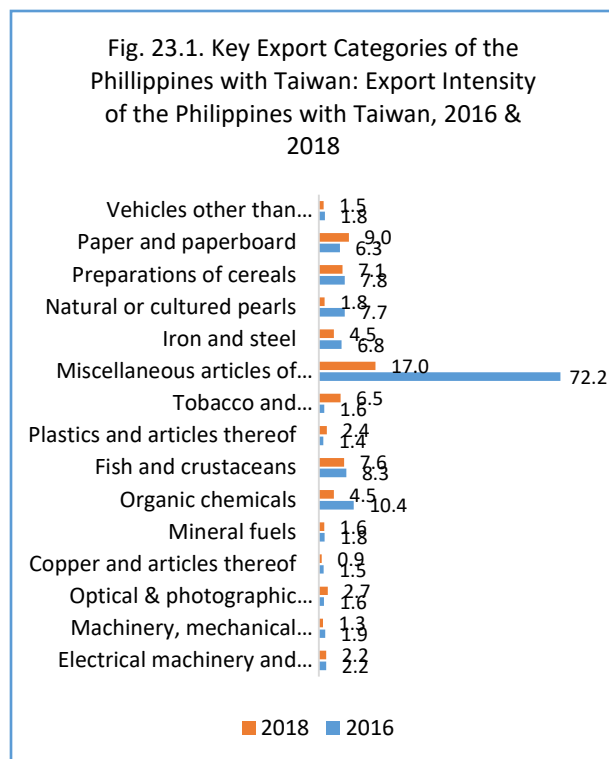
The weak growth performance of the imports and exports of the Philippines with Taiwan has translated to a sharp drop in its import intensity and a slight decline in its export intensity with Taiwan signifying their mutual inclination to explore several other trading partners. Still, the Philippines' trade relations with Taiwan are more intense than with China and the U.S. Akin to the Philippines' trade relations with China, the Philippines' export relations with Taiwan have also remained less intense than its import relations with the same and the trade intensity index of Taiwan with the Philippines is also higher than vice-versa hinting at their globally oriented, investment-driven vertical intra-industry bilateral trade dynamics.

The Philippines' intense import relations with Taiwan can be traced to several primary commodities and light manufactures (i.e., carpets, cork, works of art, salt and sulphur, cotton, tobacco, other vegetable textile fibers, and furskins) most of which have experienced a dramatic increase in the Philippines' import intensity with Taiwan. But eight of the 10 key import categories of the Philippines with Taiwan have posted a significant decline in the country's import intensity with Taiwan (i.e., parts and components of electrical machinery and machinery and mechanical appliances, mineral fuels, salt and sulphur, organic chemicals, and articles of iron and steel). The import intensity of the Philippines with Taiwan has also decreased in pharmaceutical products, while it has increased in a mix of import categories, such as optical equipment, clocks, carpets, footwear, other vegetable textile fibers, furskins, cotton, and knitted and crocheted fabric.





The Philippines' intense export relations with Taiwan can be traced to a variety of product categories, such as, paper and paper products, fish and crustaceans, organic chemicals, aluminum, miscellaneous articles of base metals, live animals, railway, plastics, optical equipment, cotton, works of art and cereals. The slight decline in the Philippines' export intensity with Taiwan is reflected in seven major export categories with the largest drop recorded by organic chemicals, miscellaneous articles of base metal, and natural or culture pearls. This is partially offset by an increase in Philippines' export intensity index with Taiwan in a few medium- and high-technology goods and agricultural commodities, such as plastics, optical equipment, live animals, railway, cotton, and cereals.



### 3.3.3. Trade Intensity with the U.S.

The Philippines' trade intensity with the U.S. displays a different dynamics from that with Taiwan and China. For one, the Philippines' trade relations with the U.S. is less intense than with China and Taiwan and its export relations with the U.S. is more intense than its import relations with the same. There is also a relatively narrow disparity in the trade intensity of the Philippines with the U.S. and vice-versa. Between 2016 and 2018, the Philippines' import relations with the U.S. have become even less intense, while its export relations with the U.S. has intensified.

Although the Philippines has a relatively low import intensity with the U.S., it has highly intense import relations with the U.S. in various agricultural products, such as oilseeds, cereals, pulp of wood, cotton, dairy produce, products of animal origin, meat and edible meat offal, and other vegetable textile fibers. The Philippines' import relations with the U.S. is also intense in miscellaneous chemical products, photographic or cinematographic equipment, printed books and beverages. The decrease in the import intensity of the Philippines with the U.S. is reflected in several key import categories, such as electrical machinery, residues and waste, cereals, aircraft, optical equipment, beverages and miscellaneous edible preparations, but it has increased in a few import categories (i.e., cotton, products of animal origin, headgear, photographic equipment, and other vegetable textile fibres).

Fig. 24.1. Key Import Categories of the Philippines with the U.S: Import Intensity of the Philippines with the U.S., 2016 & 2018

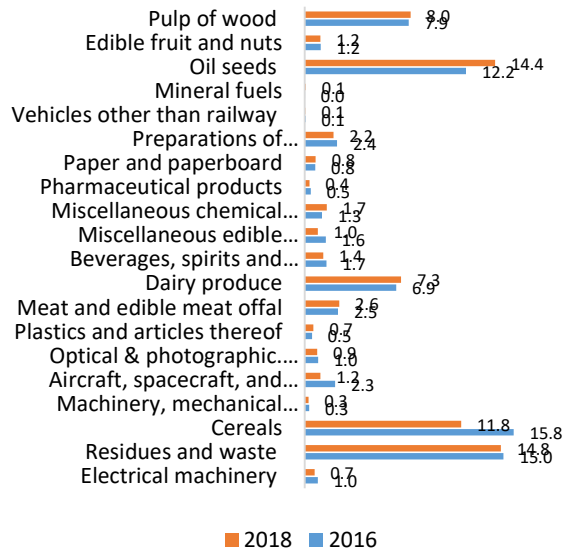
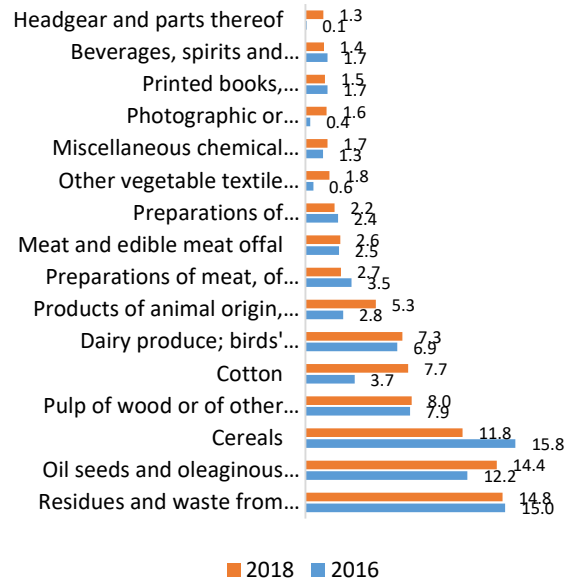
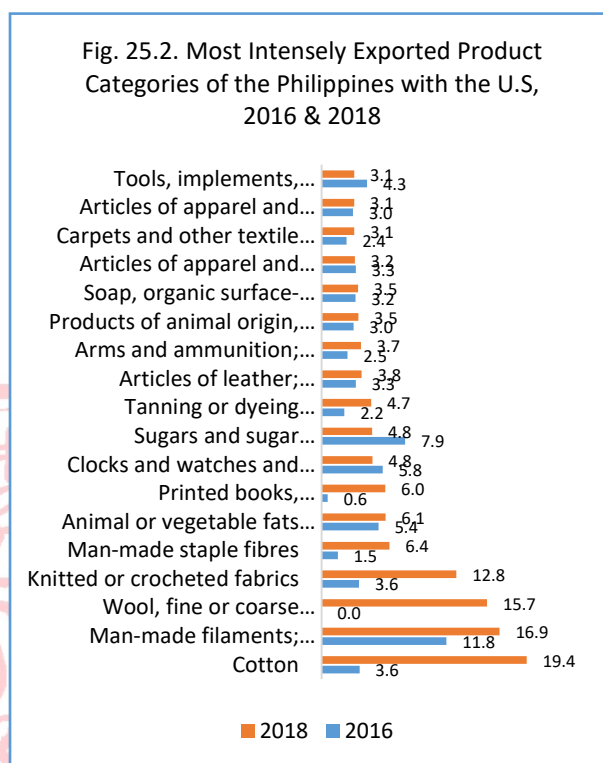
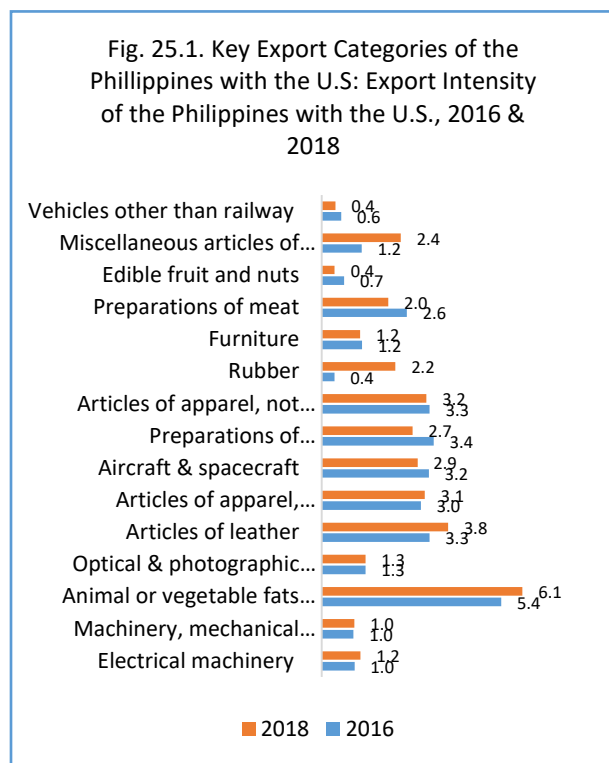


Fig. 24.2. Most Intensely Imported Product Categories of the Philippines with the U.S., 2016 & 2018



The Philippines' intense export relations with the U.S. is buoyed by its high export intensity with the U.S. in agricultural commodities and primary goods (e.g., cotton, man-made filaments, wool, knitted or crocheted fabrics, man-made stable fibres, animal or vegetable fats and oils). The increase in the export intensity of the Philippines with the U.S. is reflected in almost all top export categories of the Philippines with the U.S., but it has declined in some important export categories, such as aircraft, spacecraft, preparation of vegetables and articles of apparel.



#### 4. The Philippines’ Trade Intensity and Complementarity with Taiwan, China and the U.S: The Role of Foreign Policy Preference

The relative trade intensities of the Philippines with Taiwan, China, and the U.S. roughly track its relative trade complementarities with the three countries. But the strength of trade complementarity-intensity nexus has shown to differ across trading partners, trading activities, i.e., importing and exporting, and product categories coinciding with the expected impacts of the foreign policy preference of the Philippines and its trading partners as embodied in their economic and trade agreements.

##### 4.1. Trade Intensity-Complementarity Nexus

There are striking differences in the dynamics of the Philippines’ import intensity-complementarity nexus and its export intensity-complementarity linkage with Taiwan, China, and the U.S. suggesting a greater influence of foreign policy preference and geographic proximity on the import side, especially in the context North-South vertical intra-industry trade.

##### 4.1.1. Export Intensity-Complementarity Nexus

Despite having virtually the same degree of export complementarity with Taiwan and China, the export intensity index of the Philippines with Taiwan is twice its export intensity index with China,



while the difference in the country's export intensities with Taiwan and th U.S. reflect the wide disparity in the export complementarities of the country with Taiwan and the U.S. The exceedingly high export intensity of the Philippines with Taiwan reflects the prominence of trade in parts and components in the Philippines-Taiwan bilateral trade. Although the Philippines has no formal trade agreement with Taiwan, their strong North-South economic complementarities and geographic proximity appears to provide a strong basis for both sides to actively engage each other as trade and investment partners, especially in vertical intra-industry trade in technology-intensive sectors in which Taiwan plays an active role globally.

Trading Partners	Export Intensity Indices		Export Complementarity Indices	
	2016	2018	2016	2018
Taiwan	2.6	2.4	40.1	43.7
China	1.1	1.2	40.3	42.6
U.S.	1.1	1.2	31.5	33.6

Raw Data Source: ITC; Author's computation at 4-digit HS Code

There is also a slight de-linkage in the trade complementarity-intensity nexus in the Philippines' trade relationship with China and the U.S. Despite the wide disparity in the level of export complementarity of the Philippines with the U.S. and China, the export intensity index of the Philippines with the two countries are virtually the same. The disproportionately high export intensity of the Philippines with the U.S. manifests the export-enhancing effects of the preferential tariff treatment of selected export categories of the Philippines in the U.S. market under the U.S. Generalized System of Preferences. This also reflects the modest participation of the Philippines in the Chinacentric Asian regional production network in which China serves as a final export platform. With the growing vertical specialization in Asia, the Philippines is expected to export to the U.S. through China, but the relatively similar trade structures of the two countries and the Philippines' weak exporting capacity and geographic distance from China appears to limit their interconnectivity.

#### 4.1.2. *Import Intensity-Complementarity Nexus*

Reflecting the strong vertical intra-industry trade linkages between the Philippines and Taiwan, the country also maintains a highly intense import relations with Taiwan. Consistent with the disparity in the import complementarities of the Philippines with Taiwan and China, the country maintains a more intense import relations with Taiwan than with China. The same cannot be said of the dynamics of the Philippines' import intensities with China and the U.S. with respect to its trade complementarities with the two countries. The Philippines' import intensity with the U.S. has shown to be disproportionately low with respect to their trade complementarity. The Philippines has a much higher degree of import complementarity with the U.S. than with China, but the Philippines' import intensity index with China is significantly higher than its import intensity index with the U.S. The intense import relations of the Philippines with China demonstrates the trade-and investment-boosting effects of the ASEAN-China Free Trade Agreement (ACFTA), especially between FTA partners that have similar trade structures, such as the Philippines and China. The North American Free Trade Agreement (NAFTA) would have an opposite effect on the Philippines' import relations

with the U.S. NAFTA has shown to boost U.S. imports with neighboring FTA partners, one of which is Mexico, a middle-income country like the Philippines.

Trading Partners	Import Intensity Indices		Import Complementarity Indices	
	2016	2018	2016	2018
Taiwan	3.5	2.9	49.7	50.3
China	1.4	1.5	40.7	43.2
U.S.	1.0	0.8	57.8	59.3

Raw Data Source: ITC; Author's computation at 4-digit HS Code

## 4.2. The Role of the Foreign Policy Pivot to China

As detailed above, the dynamics of the trade intensity-complementary nexus of the Philippines with Taiwan, China, and the U.S. reflects the confluence of trade complementarities, foreign policy preferences as embodied in their trade agreements, and geographic proximity. Under the Duterte Administration, there are strong indications that the trade intensity-complementarity linkage of the Philippines with Taiwan, China and the U.S. has further weakened in a manner that is somewhat in concurrence with the expected impact of the country's foreign policy preference towards China. The Philippines' export intensity index with Taiwan has slightly declined, while that with China and the U.S. has inched up despite a larger improvement in the Philippines' export complementarity with Taiwan relative to its export complementarity with China and the U.S. With the slightly smaller improvement in the Philippines' import complementarity with Taiwan than with China and the U.S., its import intensity with Taiwan has markedly decreased. Still, the vertical intra-industry trade ties between Taiwan and the Philippines have proven to be strong enough to muddle through a pro-China foreign policy landscape as revealed by its persistently high trade intensity index with Taiwan. The current Administration's foreign policy preference towards China, however, has marginal influence on the Philippines' trade intensity with the U.S. The Philippines' export complementarity with China has posted a slightly larger improvement than its export complementarity with the U.S. coinciding with virtually the same increase in its export intensities with the two countries. With a larger improvement in the Philippines' import complementarity with China than with the U.S., import intensity of the country with China has slightly increased, while that with the U.S. has decreased.

### 4.2.1. Trade Intensity and Revealed Comparative Advantage Correlation

The varying dynamics of the trade complementarity and intensity of the Philippines with Taiwan, China and the U.S. is reflected in the results of a simple correlation analysis of its trade intensities and the RCA patterns of its bilateral trade with the three countries at four-digit HS classification. The Philippines' trade intensity and complementarity with China has displayed the weakest correlation. The Philippines' import intensity has displayed a weak negative correlation with China's export RCA, indicating that China explores more competitive export markets as its exportables gain comparative advantage. To a limited extent, similar dynamics is observed in the Philippines' import intensity with Taiwan, i.e., Taiwan also tends to explore other export markets as its exportables gain comparative

advantage. But such dynamics does not mainly drive the Philippines' import intensity with Taiwan but rather the shift in the country's import specialization patterns away from product categories that Taiwan exports to the Philippines. In contrast, the Philippines' import intensity with the U.S. is strongly hinged on trade complementarity. The import intensity of the Philippines with the U.S. has shown to have a strong positive correlation with the import RCA of the Philippines and the export RCA of the U.S. and a strong negative correlation with the U.S. import RCA. This suggests that the slight decline in the Philippines' import intensity with the U.S. is induced by a shift in the export and import specialization patterns of the two countries in a way that reduces their trade complementarity.

**Table 3. Correlation of Trade Intensity and RCA Patterns of the Philippines' Trade with Taiwan, China and the U.S.**

Trading Partner	Export Intensity and RCA Correlation				Import Intensity and RCA Correlation			
	Philippine Export RCA	Trading Partner's Export RCA	Philippine Import RCA	Trading Partner's Import RCA	Philippine Export RCA	Trading Partner's Export RCA	Philippine Import RCA	Trading Partner's Import RCA
Taiwan	-0.08	-0.09	-0.11	-0.10	-0.09	-0.17	0.26	-0.17
China	-0.03	-0.01	-0.06	-0.12	-0.04	-0.18	-0.07	-0.07
US	-0.11	-0.03	-0.06	-0.22	-0.12	0.32	0.31	-0.31

Raw Data Source: ITC; Author's computation at 4-digit HS Code

The Philippines' export intensities with Taiwan, China, and the U.S. have shown to be more weakly anchored on trade complementarity than its import intensities with the three countries, with its export intensity with China displaying the weakest correlation with RCA patterns. The Philippines' export intensities with Taiwan, China, and the U.S. have a negative but very weak correlation with the country's export RCA with the correlation coefficient higher for the country's export intensity with Taiwan. Reflecting the small market size of Taiwan and the Philippines, the Philippines appears to rely less on the Taiwanese market as it gains comparative advantage in product categories it exports to Taiwan, while Taiwan explores other import suppliers as its import demand increases. Hinting at the market access advantage of the preferential tariff treatment of selected export categories of the Philippines under the U.S. Generalized System of Preferences, its export intensity with the U.S. is positively correlated with the U.S. import RCA.

#### 4.3. The Competitive Dynamics of the Philippines' Trading Relationship with Taiwan, China and the U.S.

The similarity indices of the Philippines' trade portfolios with Taiwan, China, and the U.S. have shown to be more competitive than complementary, particularly on the export side. The increasingly tight competition between China and the Taiwan has shown to magnify the impact of the Philippines' China-friendly foreign policy on its trade intensities with the two countries. Under the pro-China Duterte Administration, the competitive trade dynamics of the three counties has translated to contrasting changes in their trade intensities with the Philippines in several key product categories generally in favor of China.

##### 4.3.1. Trade Similarity Index



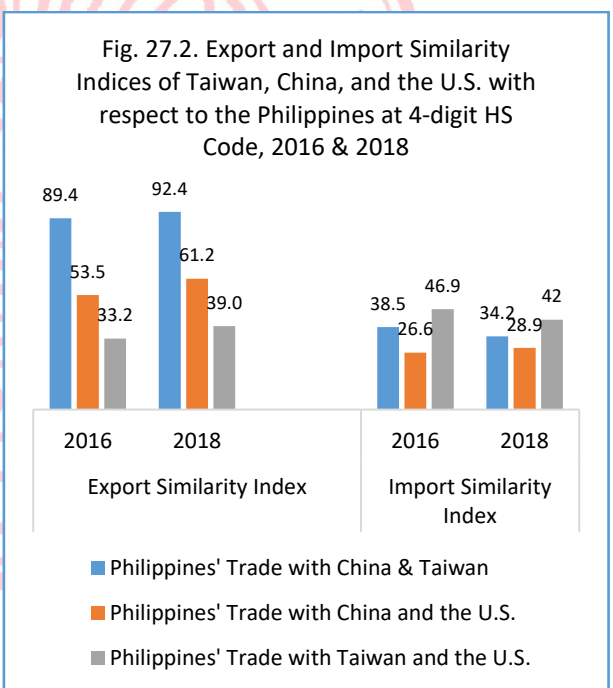
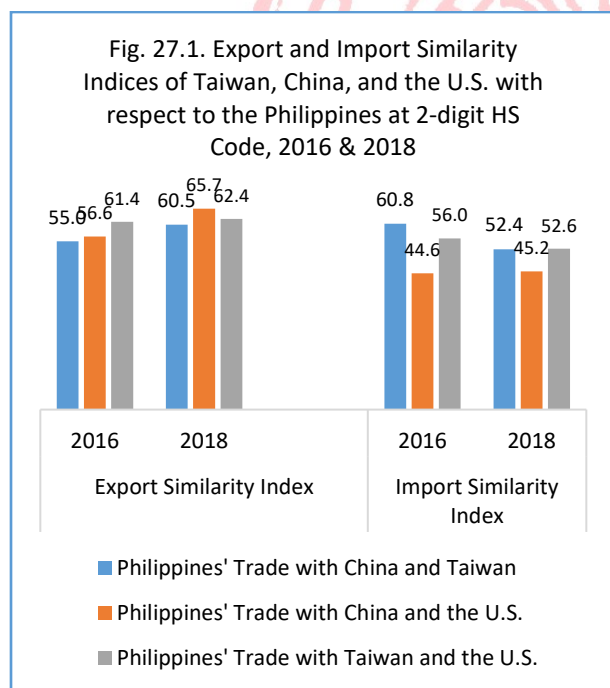
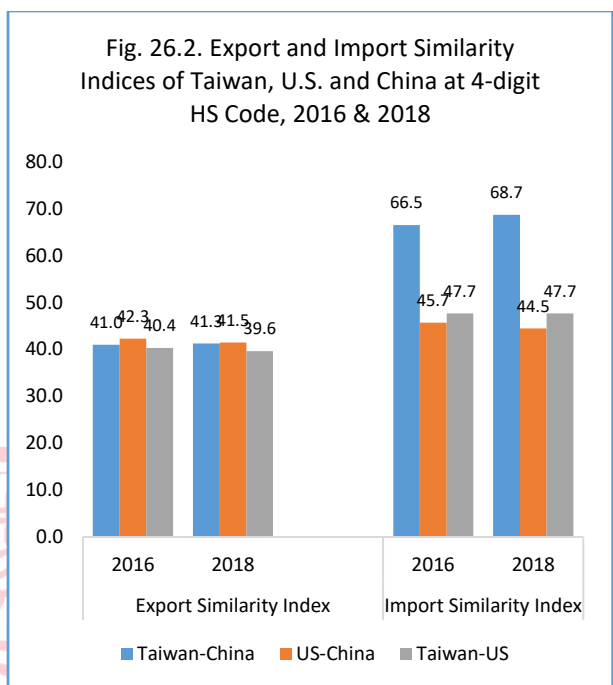
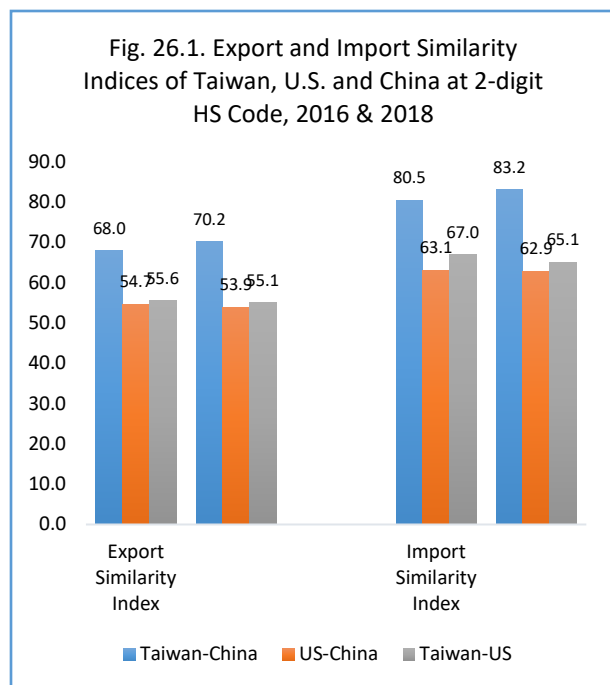
The impact of the China-friendly foreign policy of the Philippines on its trading relationship with China, Taiwan, and the U.S. reflects the competitive dynamics of the Philippines' trade with the three countries, the characteristics of the products in which their trade interests overlap, and the second-round trade effects of foreign policy preference. The Philippines' trade portfolios with Taiwan and China have the highest similarity index indicating a high degree of competition between the two countries with respect to the Philippines. The Philippines' trade portfolios with Taiwan and China are dominated by medium-and high-technology goods which offer a lot of complementary opportunities for vertical specialization. But export competition in said goods has intensified as emerging markets like China are gaining comparative advantage in the same. With tight competition, close diplomatic relations can have a more than marginal impact on trade. There are also second-round effects of the Philippines' foreign policy slant towards China via trade adjustments from Taiwan and the U.S.

#### *4.3.1.1. Taiwan and China*

The Philippines' export portfolios with Taiwan and China have displayed the highest export similarity index at four-digit HS code. The top 10 export categories of the Philippines with the two countries overlap in five export categories (i.e., electronic integrated circuits, electrical machines and apparatus, diodes, transistors and similar semiconductor devices, automatic data processing, and electrical transformers). At two-digit HS classification, however, the Philippines' export portfolios with Taiwan and China have the lowest similarity index indicating a lower degree of competition in low-technology sectors. Still, the Philippines' export relations with Taiwan and China are more competitive than complementary. The Philippines' export portfolios with Taiwan and China overlap in several key export categories, such as edible fruits, organic chemicals, mineral fuels, copper, and machinery and mechanical appliances. Although these are key export categories of the Philippines with Taiwan, China's shares in the exports of the Philippines in these product categories dwarf that of Taiwan.

Interestingly, the similarity index of the Philippines' export bundles with Taiwan and China is significantly lower than the import similarity index of Taiwan with China at two-digit HS code. At four-digit HS code, however, the similarity index of the Philippines' export portfolios with Taiwan and China countries is higher than the import similarity index of the two countries indicating a more intense competition between the two countries in the Philippines. Between 2016 and 2018, the export similarity index of the Philippines with Taiwan and China has increased by more than the improvement in the import similarity index of Taiwan and China indicating further tightening of the import competition between the two countries with respect to the Philippines. This appears to trigger further trade adjustments as intimated by a slight decrease in the export intensity index of the Philippines with Taiwan and growing specialization of the Philippines-Taiwan trade in electrical machinery.





Export competition between Taiwan and China with respect to the Philippines is also intense. At four-digit HS code, the import portfolios of the Philippines with Taiwan and China have the second highest similarity index, while it has the highest similarity index at two-digit HS code. The Philippines' import portfolio with the two countries overlap in five key product categories (i.e., petroleum oils, electronic integrated circuits, telephone sets, flat-rolled products of iron or non-alloy steel, flat-rolled products of alloy steel other than stainless, and printing machinery). Notably, the Philippines' import similarity index is lower than the export similarity index of the two countries, hinting at possible trade

adjustments by Taiwan through increased specialization in electrical machinery as China dominates Philippine imports. Between 2016 and 2018, the similarity index of the Philippines' import portfolios with Taiwan and China, however, has significantly decreased despite a slight increase in the export similarity index of China and Taiwan at both levels of commodity aggregation. The decreased export competition between Taiwan and China with respect to the Philippines concurs with a substantial drop in the Philippines' import intensity with Taiwan. The marked decline in the import intensity of the Philippines with Taiwan amid decreased similarity of the country's import portfolios with Taiwan and China suggests that the growing dominance of China in the country's imports appears to induce Taiwan to complement China's trade by specializing in electrical machinery as it aggressively explores other markets.

#### *4.3.1.2. China and the U.S.*

The Philippines' export portfolios with China and the U.S. have the second highest similarity index at both levels of commodity aggregation. At the start of the Duterte Administration, the similarity index of the Philippines' export portfolios with China and the U.S. is lower than the import similarity index of China and the U.S., i.e., the degree of competition is lower in the Philippines than the import similarity of China and the U.S. suggests. Between 2016 and 2018, however, the similarity index of the Philippines' export baskets with China and the U.S. have significantly increased despite the slight decline in the import similarity index of China and the U.S. Under the current Administration, the U.S. faces tougher competition from China as an export partner of the Philippines, especially in electrical machinery. The top 10 export categories of the Philippines with China and the U.S. overlap in six export categories (i.e., automatic data processing, electronic integrated circuits, electrical machines and apparatus, printing machinery, diodes, and electrical transformers). Beyond medium- and high-technology goods, however, the export interests of the Philippines' with the two countries limitedly overlap; hence, the persistently strong export relations of the Philippines with the U.S. Of the 20 key export categories of the Philippines to the U.S., the U.S. export share in the Philippines' exports dwarfs that of China in 17 export categories (i.e., furniture, articles of apparel, toys, animal or vegetable fats and oils, preparation of vegetables, preparation of meat and fish, articles of leather, and clocks). Most of these product categories are either of offensive or defensive trade interests to China making the U.S. an unrivaled export market for the Philippines in these product categories.

The export competition between China and the U.S. is less intense than their import competition with respect to the Philippines. The Philippines' import bundles with China and the U.S. have displayed the lowest similarity index, substantially lower than the export similarity index of the U.S. and China. This reflects the FTA-induced regionalization of trade with the U.S. exporting more to its neighboring FTA partners and China exporting to ASEAN member states. But during the first two years of the Duterte Administration, the export competition between China and the U.S. in the Philippines has slightly intensified as indicated by an increase in the similarity of the Philippines' import portfolio with China and the U.S. The growing export competition between China and the U.S. in the Philippine market is highly evident in the aircraft industry. The American aircraft industry represents the top of the U.S. value chain in manufacturing. But China's domestic commercial aircraft aims to supply 20 percent of the global market and regional delivery planes to capture 40 percent of the global market by 2025 through government subsidies and technology transfer from foreign

enterprises and inputs from advanced economies, such as the U.S.<sup>38</sup> While China now serves as the U.S. largest export market for aircraft, China competes with the U.S. in exporting parts and components of aircraft to the Philippines. Aside from aircraft, trade interests of China and the U.S. in the Philippines increasingly overlap in arms and ammunitions, vehicles, and edible fruits, among others. The overlapping trade interests of the U.S. and China in the Philippines is also evident in the key import categories of the Philippines with the U.S. Of the top 20 import categories of the Philippines with the U.S., China has a higher import share than the U.S. in 10 import categories, namely, electrical machinery, machinery and mechanical appliances, optical and medical instruments, plastics, miscellaneous chemical products, paper, vehicles, mineral fuels, and edible fruits.

#### *4.3.1.3. Taiwan and the U.S.*

The Philippines' export portfolios with Taiwan and the U.S. have exhibited the lowest similarity index. At two-digit HS code, the similarity index of the export bundles of the Philippine with Taiwan and the U.S. is reflective of the import similarity index of the two countries. But at four-digit HS code, the similarity index of the Philippines' export portfolios with Taiwan and the U.S. is significantly lower than the import similarity index of the two countries indicating their complementary vertical intra-industry trade linkages. The import competition between Taiwan and the U.S. with respect to the Philippines, however, has intensified as indicated by an increase in the similarity index of the Philippines' export bundles with the two countries. The top 10 export categories of the Philippines with Taiwan and the U.S. overlap in five export categories (i.e., automatic data processing, electronic integrated circuits, electrical machines and apparatus, diodes, and electrical transformers). Export competition between Taiwan and the U.S. is more intense than their import competition with respect to the Philippines. The Philippines' import portfolios with Taiwan and the U.S. have recorded the highest import similarity index reflecting their wide participation in the GVC of high-technology goods. The top 10 import categories of the Philippines with Taiwan and the U.S. overlap in four export categories, i.e., electrical machinery, machinery and mechanical appliances, optical equipment, and plastics. Between 2016 and 2018, however, the similarity index of the Philippines' import bundles with Taiwan and the U.S. have slightly declined, which concurs with a decrease in the import intensity index of the Philippines with the Taiwan and the U.S. between suggesting trade adjustments on both sides as China dominates Philippine imports.

#### *4.3.2. Correlation of Philippines' Trade Intensity Indices with Taiwan, China and the U.S*

With the competitive trade structures of Taiwan, China, and the U.S., the trade intensities of the Philippines with the three countries either have a strong negative correlation or weak positive correlation. There is a striking disparity in the correlation of the Philippines' trade intensities with the three countries among key product categories at two digit HS code and four-digit reflecting the growing competition from China in medium-and high-technology goods which account for the bulk of the Philippines' key import and export categories with the three countries at four-digit HS code.

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<sup>38</sup> U.S. Senate Committee on Small Business and Entrepreneurship (2019), "Made in China 2025 and the Future of the American Industry, [https://www.rubio.senate.gov/public/\\_cache/files/d1c6db46-1a68-481a-b96e-356c8100f1b7/3EDECA923DB439A8E884C6229A4C6003.02.12.19-final-sbc-project-mic2025-report.pdf](https://www.rubio.senate.gov/public/_cache/files/d1c6db46-1a68-481a-b96e-356c8100f1b7/3EDECA923DB439A8E884C6229A4C6003.02.12.19-final-sbc-project-mic2025-report.pdf)



#### 4.3.2.1. Export Intensity Correlation

Reflecting the high similarity index of the Philippines' export portfolio's with Taiwan and China at four-digit HS code, its export intensities with the two countries have shown to be negatively correlated, i.e., the increase in the country's export intensity with China generally concurs with a decrease in its export intensity with Taiwan and vice-versa, mostly in China's favor. The negative correlation of the Philippines' export intensities with Taiwan and China is particularly strong among key export categories of the country with Taiwan. With the relatively low similarity index of the Philippines' export portfolios with Taiwan and the U.S., the country's export intensities with Taiwan and the U.S. have shown to be weakly positively correlated, while its export intensities with China and the U.S., have also yielded a positive correlation, albeit to a lesser extent, reflecting the wide disparity in the import demand structures of China and the U.S.

Categories	Top 20 Exports of the Philippines to Taiwan/U.S.	Top 50 Exports of the Philippines to Taiwan/U.S.
Philippines' Export Intensities with Taiwan and China	-0.35	-0.02
Philippines' Export Intensities with Taiwan and the U.S.	0.16	0.15
Philippines' Export Intensities with China and the U.S.	0.08	0.09
Raw Data Source: ITC; Author's computation at 4-digit HS Code		

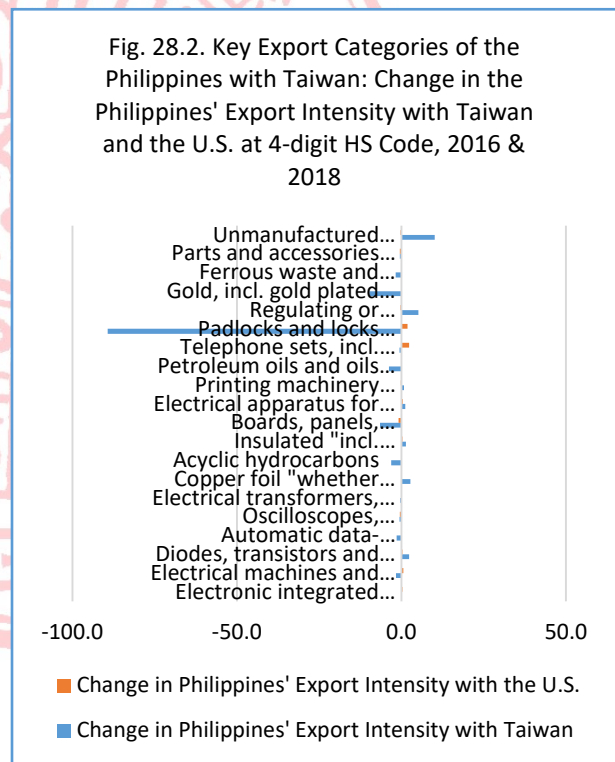
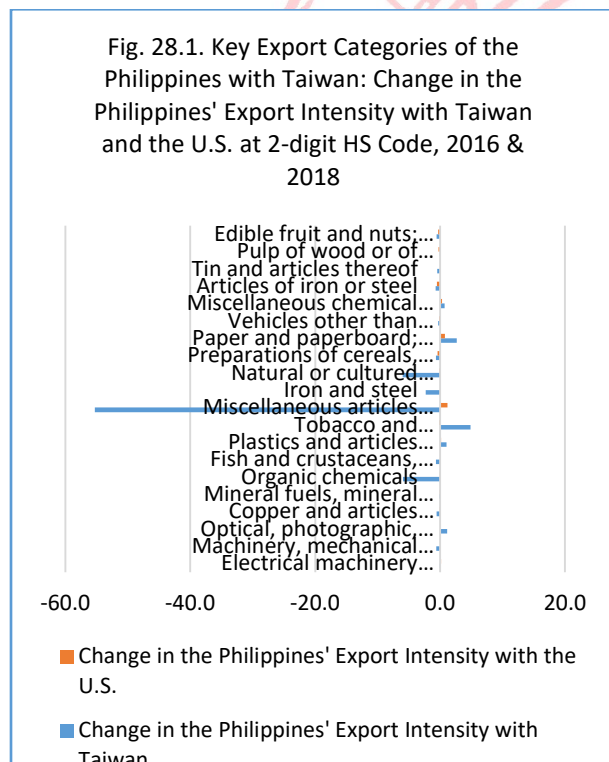
With the varying nature of the trade and investment linkages of the Philippines with the three countries, the direction of the change in the Philippines' export intensities with Taiwan, China, and the U.S. is weakly consistent with the changes in RCA patterns with wide variations across product categories. With conventional trade in final goods, comparative advantage gains of the importing country may result in decreased import demand and, as a consequence, a decline in export intensity. With vertical intra-industry trade, however, comparative advantage gains of a large importing country may translate to increased import demand for low-end GVC activities thus hiking export intensity. Strong trade and investment ties may also serve as a buffer against changing RCA patterns, i.e., an increase in the degree of competition or a decrease in trade complementarity.

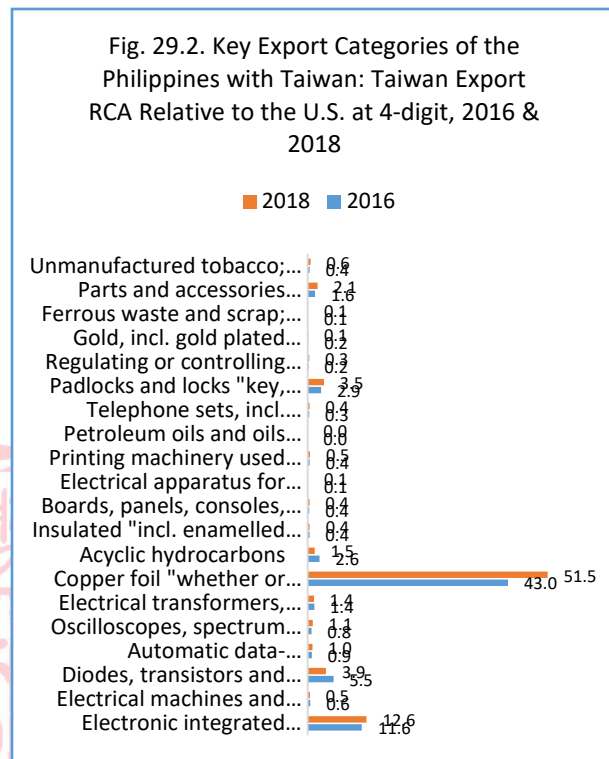
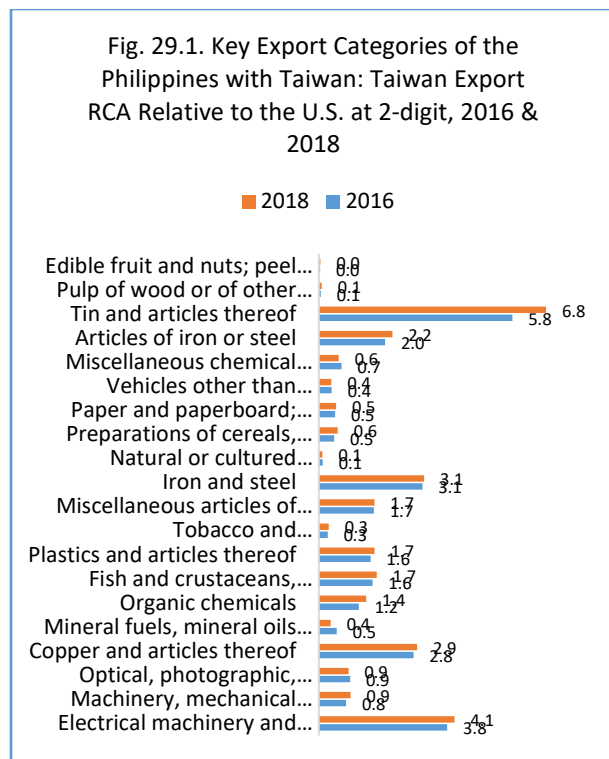
##### 4.3.2.1.1. Correlation of the Philippines' Export Intensity Indices with Taiwan and the U.S.

The export intensities of the Philippines' with Taiwan and the U.S. have shown to be weakly positively correlated, diverging mostly in favor of the U.S. in eight and six export categories of the 20 key export categories of the country with Taiwan at two-digit HS classification and four-digit HS classification, respectively. The higher export intensity of the Philippines with Taiwan than with the U.S. reflects the relatively high trade complementarity of the Philippines and Taiwan. Taiwan has a comparative disadvantage with the U.S. in majority of the 20 key export categories of the Philippines with Taiwan. Between 2016 and 2018, however, Taiwan has gained comparative advantage with the U.S. in nine key export categories thus reducing Taiwan's trade complementarity with the Philippines. The contrasting change in the Philippines' export intensities with Taiwan and the U.S. favors the U.S. on



the back of Taiwan’s comparative advantage gains in several product categories (e.g., miscellaneous articles of base metal, tin, fish and crustaceans, machinery and mechanical appliances, electrical machinery, and iron and steel, padlocks and locks, telephone sets and electronic integrated circuits). Inversely, the contrasting change in the export intensities of the Philippines with Taiwan and the U.S. have diverged in favor of Taiwan in optical equipment amid U.S. comparative advantage gains with Taiwan. But the Philippines’ import intensities with Taiwan and the U.S. have diverged in favor of Taiwan in unmanufactured tobacco on the back of Taiwan’s comparative advantage gains with the U.S., while they have diverged in favor of the U.S. in electrical machines and apparatus amid U.S. comparative advantage gains with Taiwan hinting at the vertical nature of the Philippines’ trade with the two countries and their strong export ties. Likewise, export ties of the Philippines with Taiwan have shown to be remarkably strong in regulatory and controlling instruments with the country’s export intensities with Taiwan and the U.S. diverging in favor of Taiwan sans any significant change in the RCA patterns. Similarly, the Philippines appears to maintain strong export ties with the U.S. in iron and steel as the country’s export intensities with Taiwan and the U.S. have diverged in favor of the U.S. without any significant change in the RCA patterns.

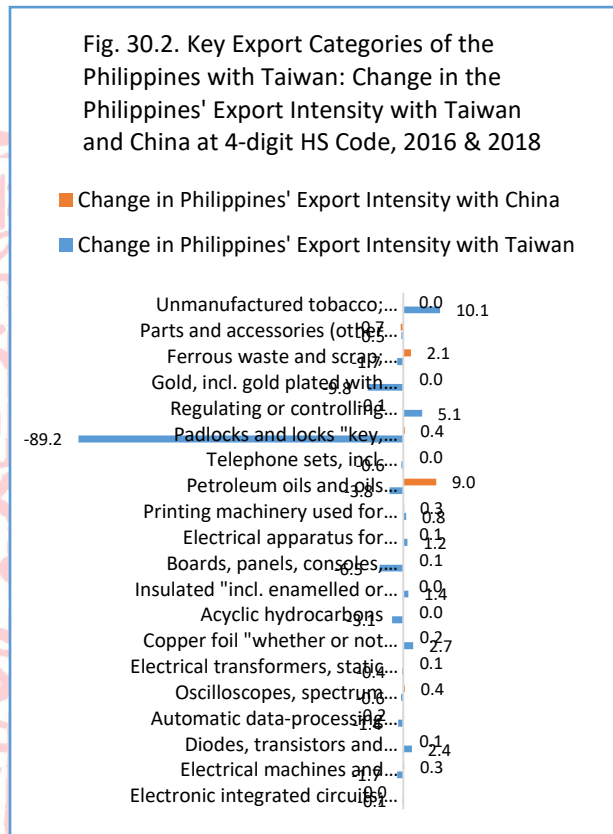
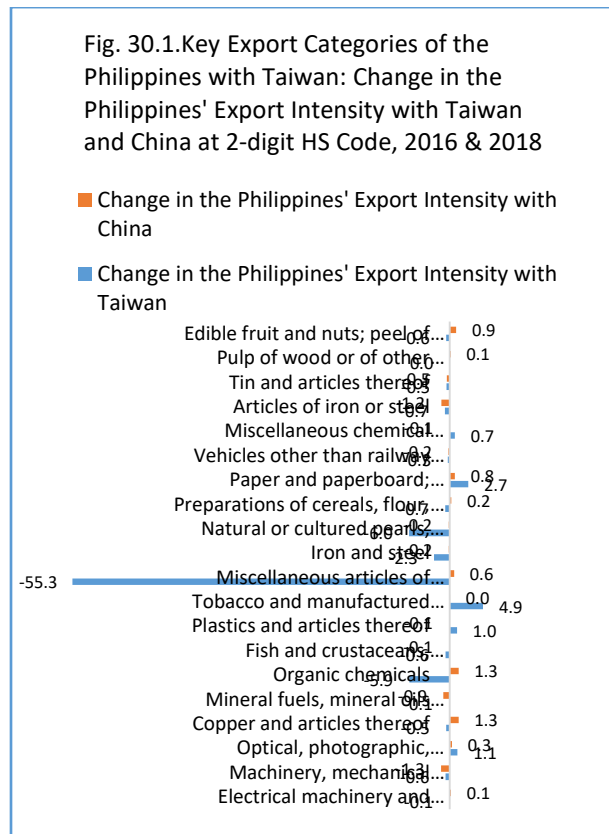


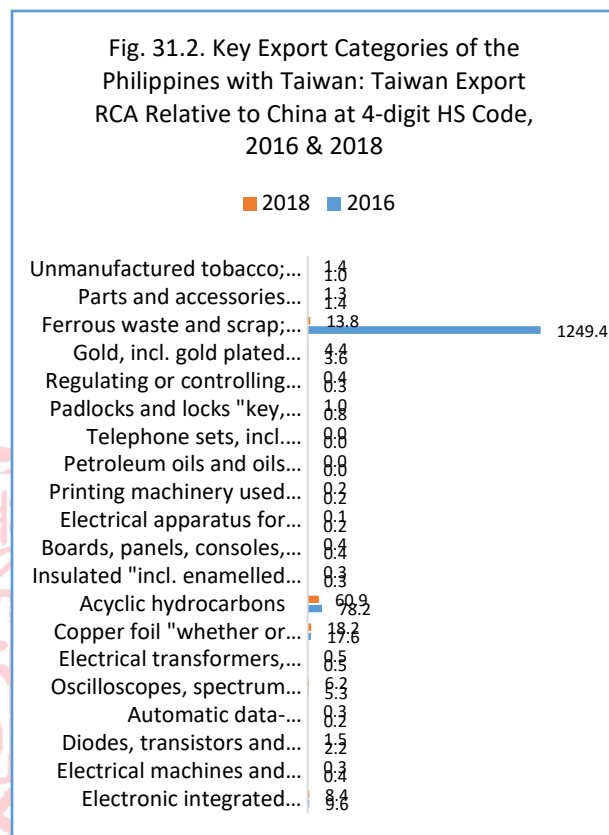
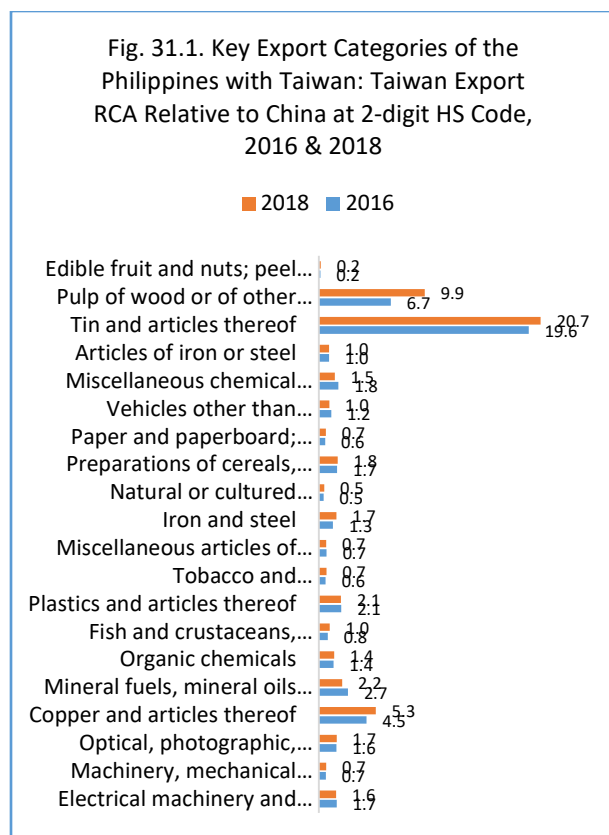


#### 4.3.2.1.2. Correlation of the Philippines' Export Intensity Indices with Taiwan and China

The export intensities of the Philippines' with Taiwan and China have yielded a negative correlation, diverging mostly in favor of China in seven and 12 export categories of the 20 key export categories of the country with Taiwan at two-digit HS classification and four-digit HS classification, respectively. The higher export intensity of the Philippines with Taiwan than with China reflects the relatively trade complementarity of the country with Taiwan in the 20 key export categories of the Philippines with Taiwan. Taiwan has comparative disadvantage with China in nine and twelve of the 20 key export categories of the Philippines with Taiwan at two-digit HS code and four-digit HS code, respectively. Between 2016 and 2018, however, Taiwan has recorded comparative advantage gains with China in nine and seven export categories at two-digit HS code and four-digit HS code, respectively. The contrasting change of the Philippines' export intensities with Taiwan and China in favor of China, however, has transpired on the back of varying changes in RCA patterns hinting at the special bilateral trade dynamics of the Philippines with the two countries. The Philippines' export intensities with Taiwan and China have diverged in favor of Taiwan in miscellaneous chemical products amid China's comparative advantage gains with Taiwan. Similarly, the Philippines' export intensities with China and Taiwan have diverged in favor of China in copper, oscilloscopes, padlocks and locks, and gold on the back of Taiwan's comparative advantage gains with China in these product categories. But the contrasting change in the Philippines' export intensities with Taiwan and China in favor of China in miscellaneous articles of base metals, acyclic hydrocarbons, electrical machines and apparatus, and ferrous wastes has transpired on the back of China's comparative advantage gains with Taiwan, while they have diverged in favor of Taiwan in tobacco products and regulatory or

controlling instruments amid Taiwan's comparative advantage gains with China, hinting at the vertical nature of the Philippines' trade with the two countries and their strong export ties. Absent any significant change in Taiwan's comparative advantage with China, the country's export intensities with Taiwan and China have diverged in favor of China in edible fruits and organic chemicals, electrical transformers, boards and panels, petroleum oils, and telephone sets intimating the strong export ties of the country with China in these product categories, while export ties of the Philippines with Taiwan have shown to be strong in plastics.



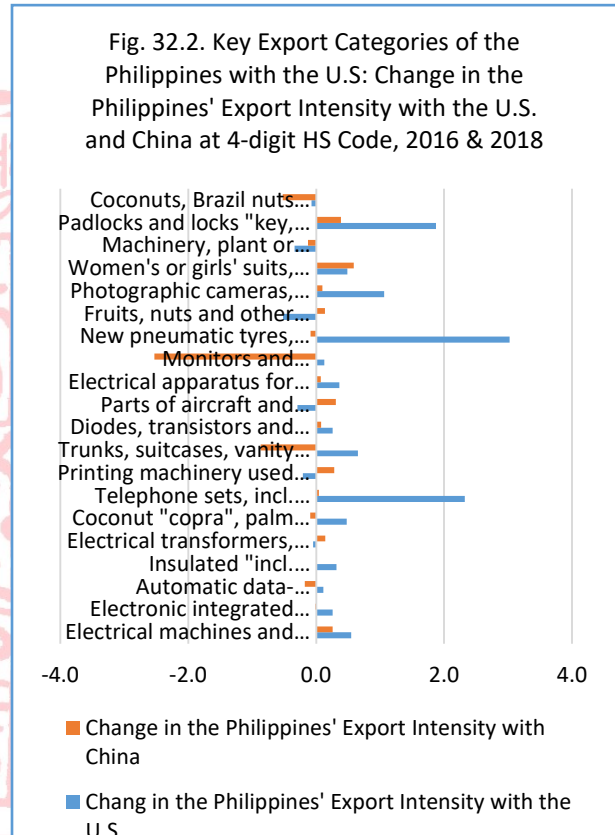
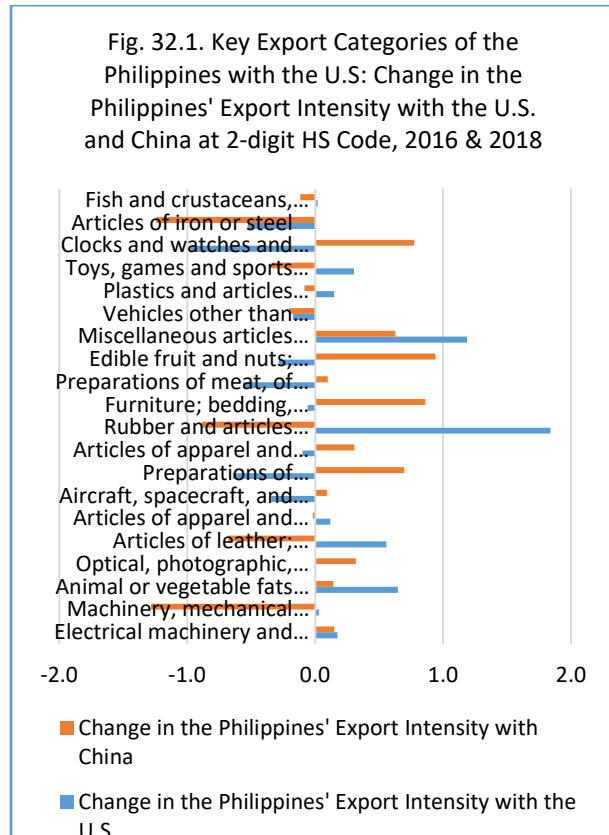


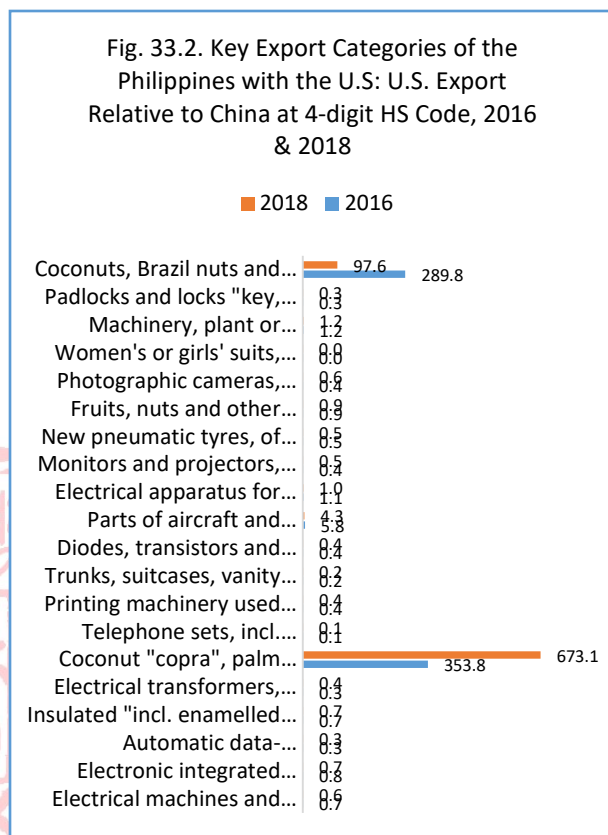
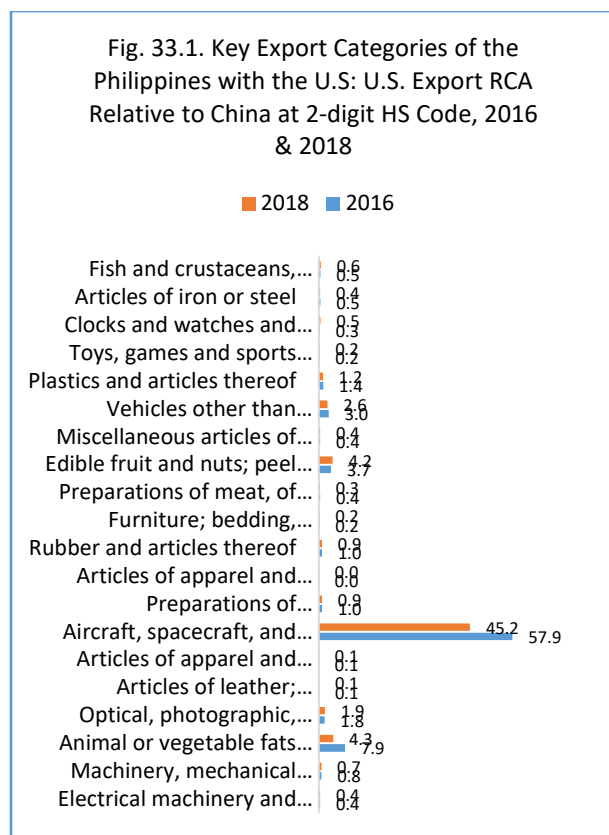
#### 4.3.2.1.3. Correlation of the Philippines' Export Intensity Indices with the U.S. and China

Although the export intensities of the Philippines' with the U.S. and China have very weak positive correlation, they have diverged mostly in favor of the U.S. in 12 and 14 export categories of the 20 key export categories of the country with the U.S. at two-digit HS classification and four-digit HS classification, respectively. The export intensity patterns of the Philippines with the two countries weakly reflect RCA patterns. Of the 20 key export categories of the Philippines with the U.S., the U.S. has comparative disadvantage with China in fourteen export categories and eighteen export categories at two-digit HS code and four-digit HS code, respectively, making the Philippines' trade more complementary with the U.S. than with China. Between 2016 and 2018, the U.S. has gained comparative advantage with China in six export categories at both levels of commodity aggregation. The Philippines' export intensities with the U.S. and China have diverged in favor of the U.S. in product categories with varied RCA profiles. Reflecting the growing trade complementarities of the Philippines with China, the contrasting change in the Philippines' export intensities with the U.S. and China favors China in edible fruits, articles of apparel, and electrical transformers. But the decline in the export intensities of the Philippines with the U.S. concurs with an increase in its export intensity with China in aircraft, preparations of vegetables, and preparations of meat, edible fruits, clocks, rubber and plastics, and parts of aircraft on the back of China's comparative advantage gains with the U.S. hinting at the vertical nature of the country's trade with the U.S. and China and its strong export ties with China. Similarly, the contrasting change in the Philippines' export intensities with the



U.S. and China favors the U.S. in photographic cameras, monitors and projectors, and copra amid the U.S. comparative advantage gains with China. Manifesting the strong export ties of the Philippines with the U.S., the country's export intensities with the U.S. and China have diverged in favor of the U.S. in articles of leather, articles of apparel, and toys and games, ADP, insulated cable wire, telephone sets, trunks and suitcases, and new pneumatic tires sans any significant change in the U.S. comparative advantage with China. Similarly, the export intensities of the Philippines with China and the U.S. have diverged in favor of China in furniture, printing machinery, and preserved fruits absent any significant change in the U.S. comparative advantage with China.





#### 4.3.2.2. Import Intensity Correlation

With the relatively high similarity index of the Philippines' import bundles with Taiwan and China, and Taiwan and the U.S., the country's import intensity with Taiwan has yielded a negative correlation with its import intensities with China and the U.S. This particularly holds among key import categories of the Philippines with Taiwan. The Philippines' import intensities with China and the U.S., on the other hand, have shown very weak correlation reflecting the relatively low similarity index of the Philippines' import bundles with the two countries and product quality differences. The direction of the change in the Philippines' export intensities with Taiwan, China, and the U.S. is also weakly consistent with the changes in RCA patterns. The exporting country's comparative advantage gains may enable it to export more to the importing country subject to the relative trade ties of the exporting country with the importing country and other import suppliers and the market size. With limited market size of the importing country, gains in comparative advantage may translate to decreased import intensity as the exporting country explores other markets.

Table 5. Correlation of the Philippine Import Intensity Indices with Taiwan, China, and the U.S.		
Categories	Top 20 Imports of the Philippines from Taiwan/US	Top 50 Imports of the Philippines from Taiwan/US
Correlation of Philippine Import Intensity Indices with Taiwan and China	-0.26	-0.03
Correlation of Philippine Import Intensity Indices with Taiwan and the U.S.	-0.17	-0.09
Correlation of Philippine Import Intensity Indices China and the U.S.	0.06	-0.06
Raw Data Source: ITC; Author's computation at 4-digit HS Code		

#### 4.3.2.2.1. Correlation of the Philippines' Import Intensity Indices with Taiwan and the U.S.

The Philippines' import intensities with Taiwan and the U.S. have shown to be negatively correlated, diverging in favor of Taiwan in six import categories and seven import categories at two-digit HS code and four-digit HS code, respectively, among the top 20 import categories of the Philippines with Taiwan. The contrasting change of the Philippines' import intensities with the two countries reflects the RCA patterns of Taiwan and the U.S. Taiwan has comparative advantage with the U.S. in eleven and thirteen of the top 20 import categories of the Philippines with Taiwan at two-digit HS code and four-digit HS code, respectively. Between 2016 and 2018, Taiwan has exhibited comparative advantage gains with the U.S. in eight import categories and nine import categories at two-digit HS code and four-digit HS code, respectively. The contrasting change in the Philippines' import intensities with Taiwan and the U.S. favors the U.S. in miscellaneous chemical products amid Taiwan's comparative advantage loss with the U.S. Reflecting the strong import ties of the Philippines with Taiwan, the contrasting change in the Philippines' import intensities with Taiwan and the U.S. favors Taiwan despite Taiwan's comparative advantage loss with the U.S. (e.g., man-made staple fibers, diodes, transistors, and similar semiconductor devices, and copper wire) and sans any significant change in Taiwan's comparative advantage with the U.S. (e.g., optical equipment and paper and paper products optical equipment and paper and paper products). Inversely, the Philippines maintains strong import ties with the U.S. in printing machinery, printed circuits, and ADP as the contrasting change of the Philippines' import intensities with the two countries in these product categories favors the U.S. amid U.S. comparative advantage loss with Taiwan.

Fig. 34.1. Key Import Categories of the Philippines with Taiwan: Change in Philippines' Import Intensity with Taiwan and the U.S. at 2-digit HS Code, 2016-2018

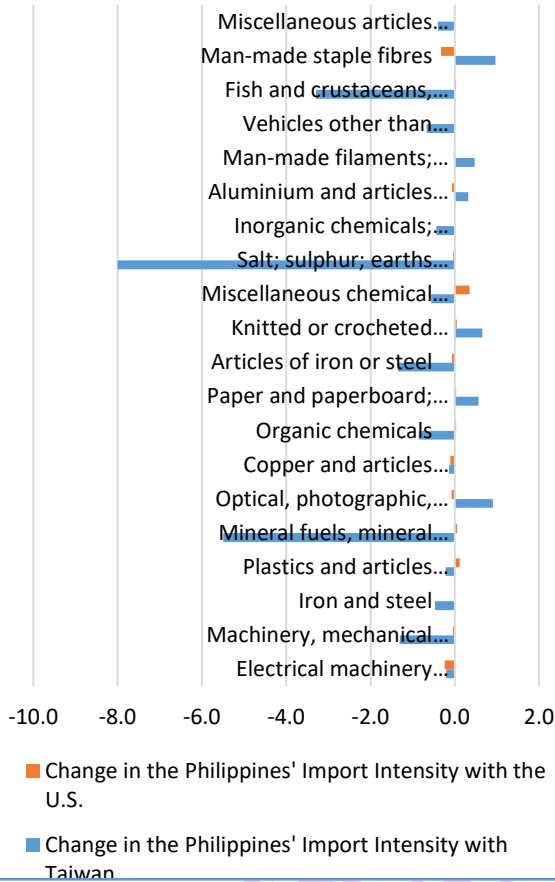
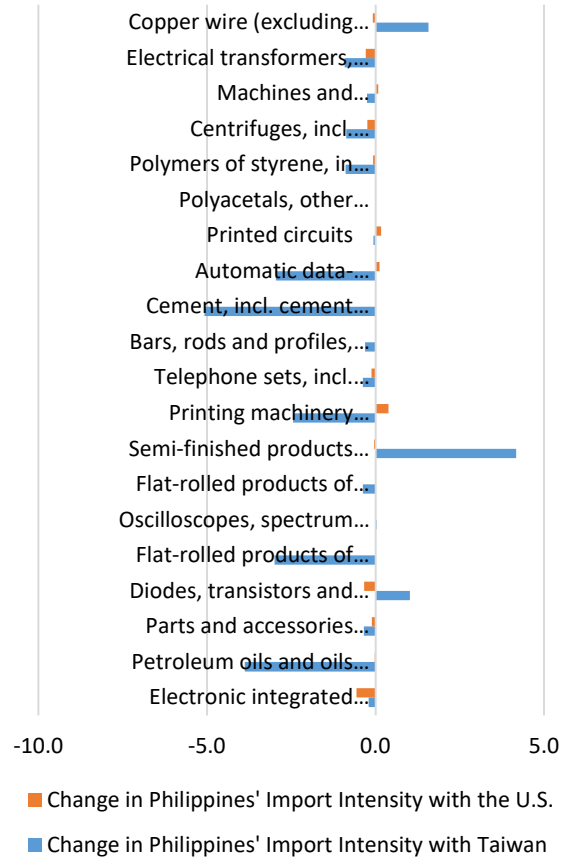
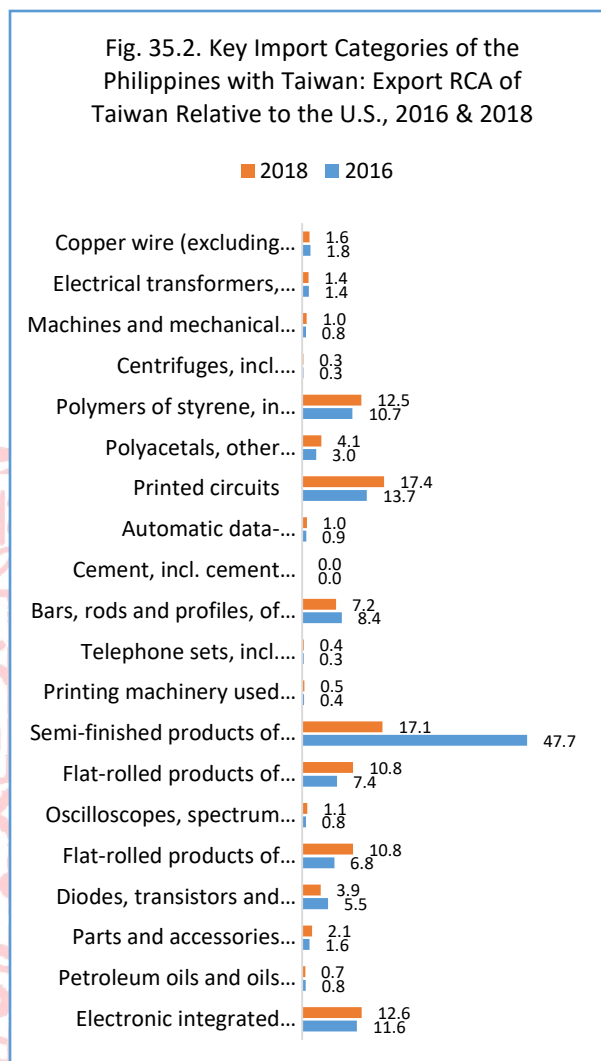
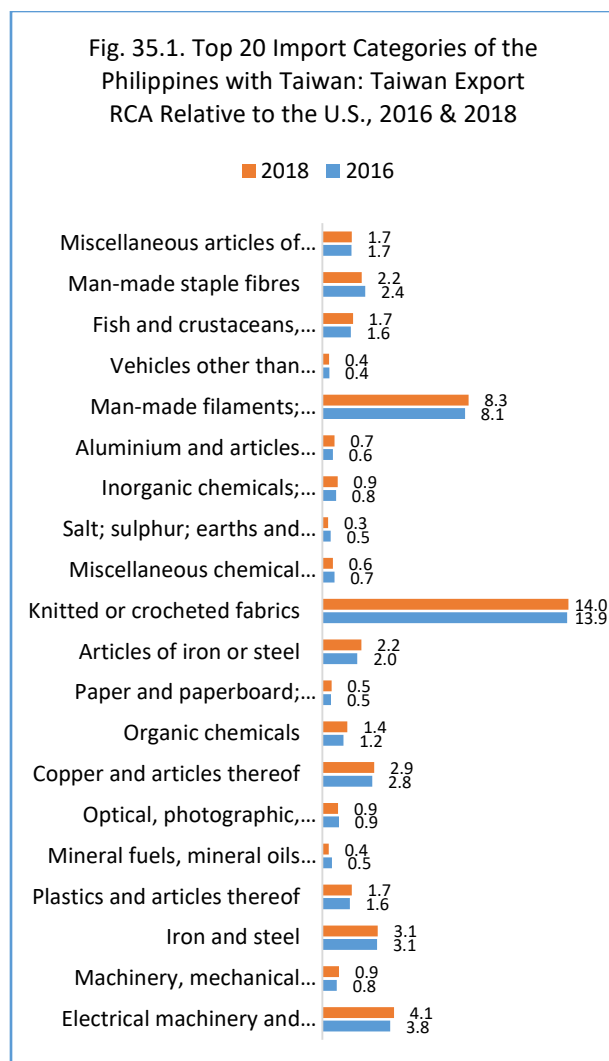


Fig. 34.2. Key Import Categories of the Philippines with Taiwan: Change in Philippines' Import Intensity with Taiwan and the U.S. at 4-digit HS Code, 2016-2018



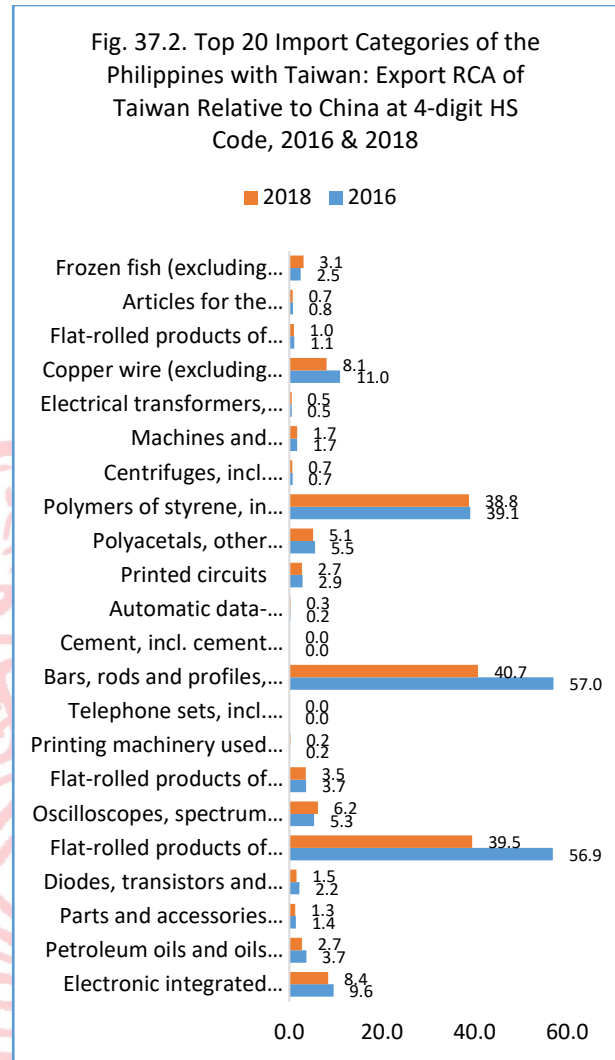
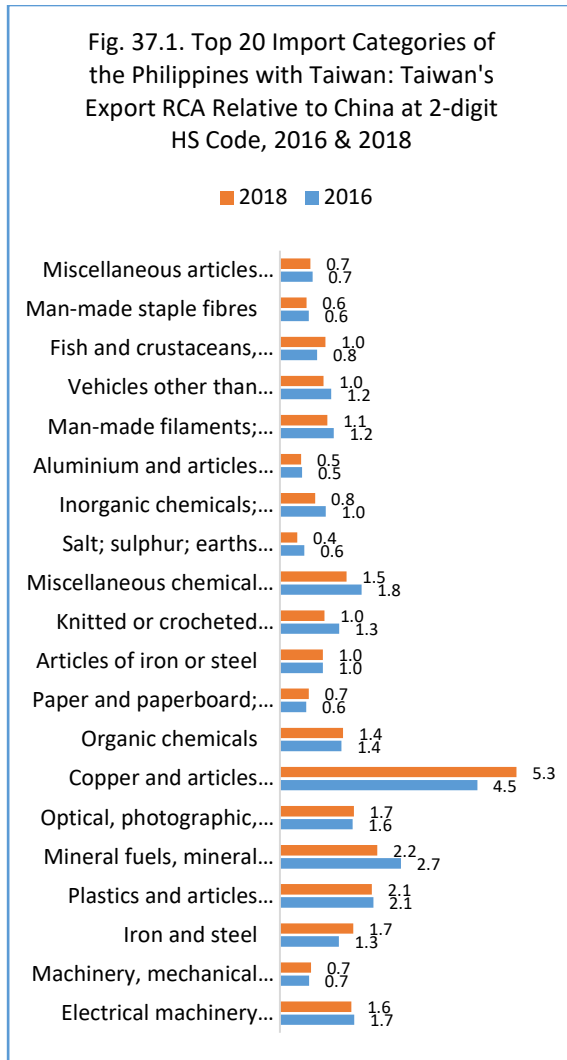




#### 4.3.2.2.2. Correlation of the Philippines' Import Intensity Indices with Taiwan and China

The Philippines' import intensities with Taiwan and China are negatively correlated, diverging strongly in favor of China in 13 and 12 of the top 20 import categories of the Philippines with Taiwan at two-digit HS code and four-digit HS code, respectively. Taiwan has comparative advantage with China in nine and fourteen of the top 20 export categories of the Philippines with Taiwan at two-digit HS code and four-digit HS code, respectively. During period 2016-2018, however, Taiwan has gained comparative advantage in only four import categories and two import categories at two-digit HS code and four-digit HS code, respectively. The contrasting change in the import intensities of the Philippines with Taiwan and China in favor of China reflects China's comparative advantage gains with Taiwan (e.g., mineral fuels, vehicles and miscellaneous chemical products, and electrical machines and apparatus, polymers of styrene, printed circuits, flat-rolled products of iron and non-alloy steel, parts and accessories, petroleum oils, and electronic integrated circuits). But despite the comparative advantage loss of Taiwan with China in man-made filaments and knitted or crocheted fabric, semi-finished products of iron or non-alloy steel and diodes, transistors, and similar semiconductor devices, the import intensity of the Philippines with Taiwan has increased while that

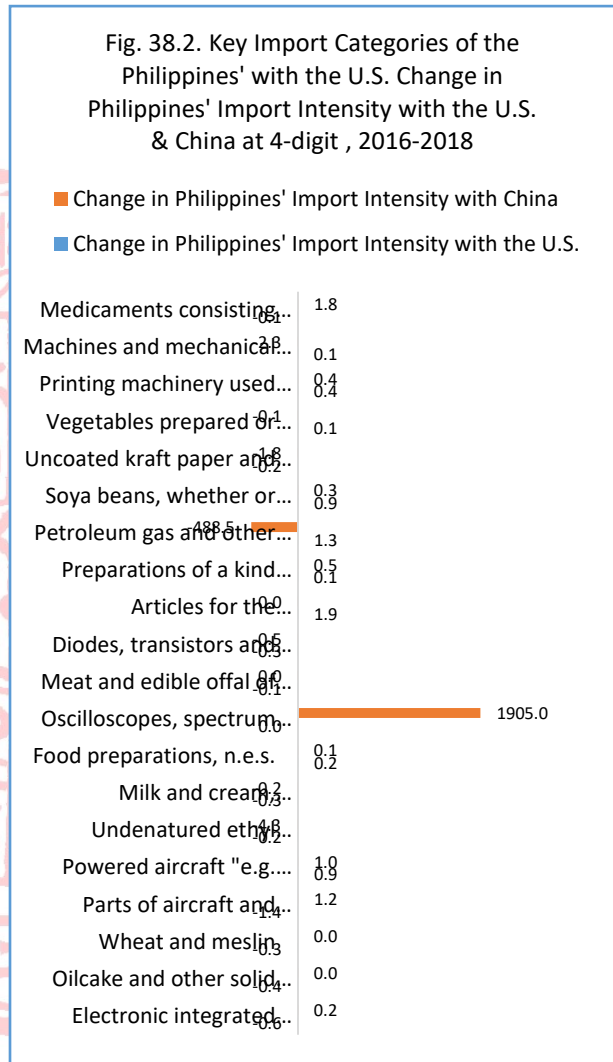
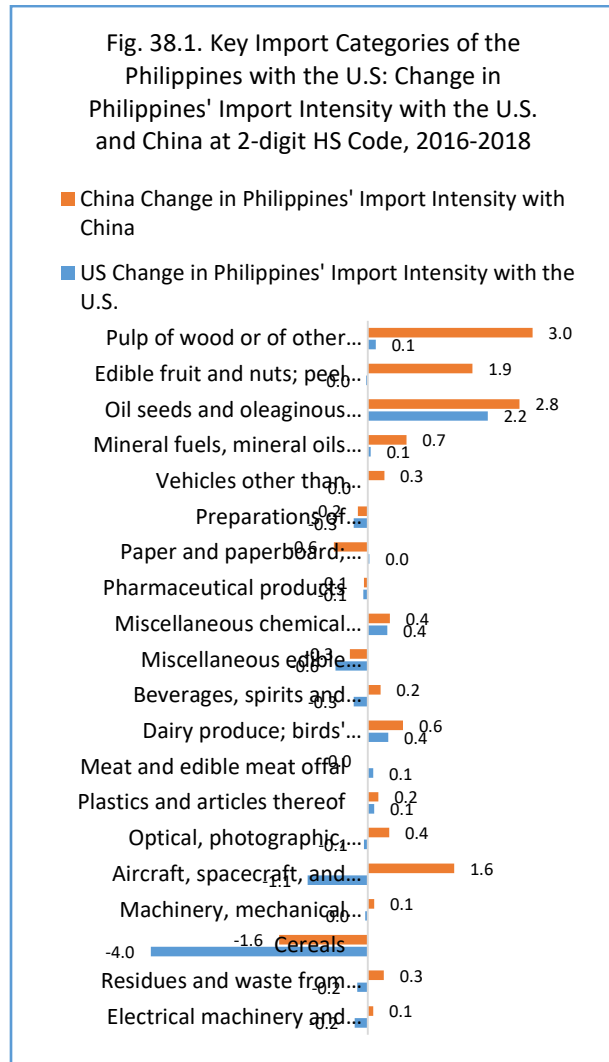




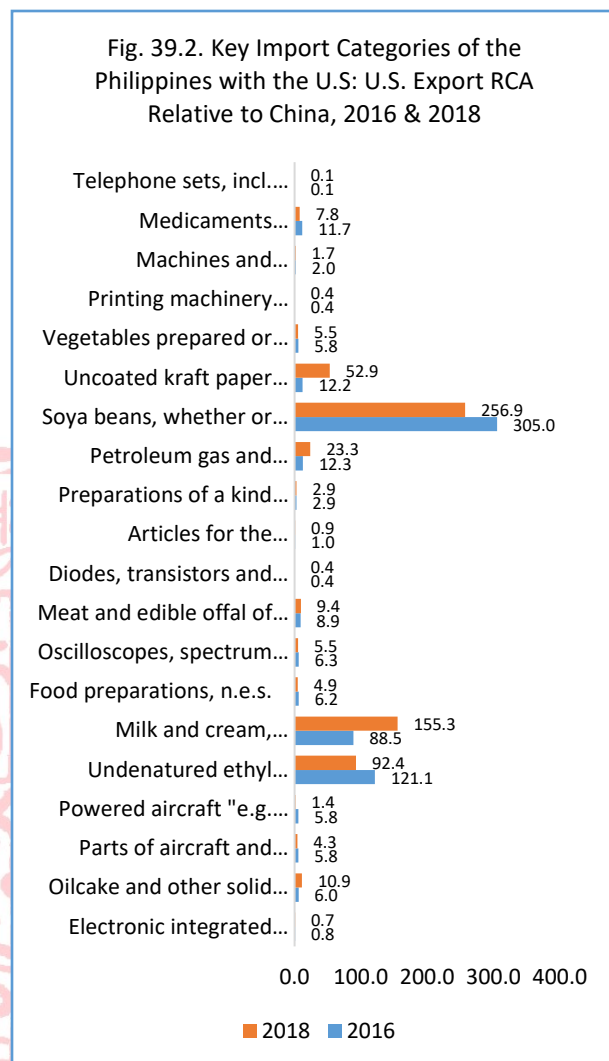
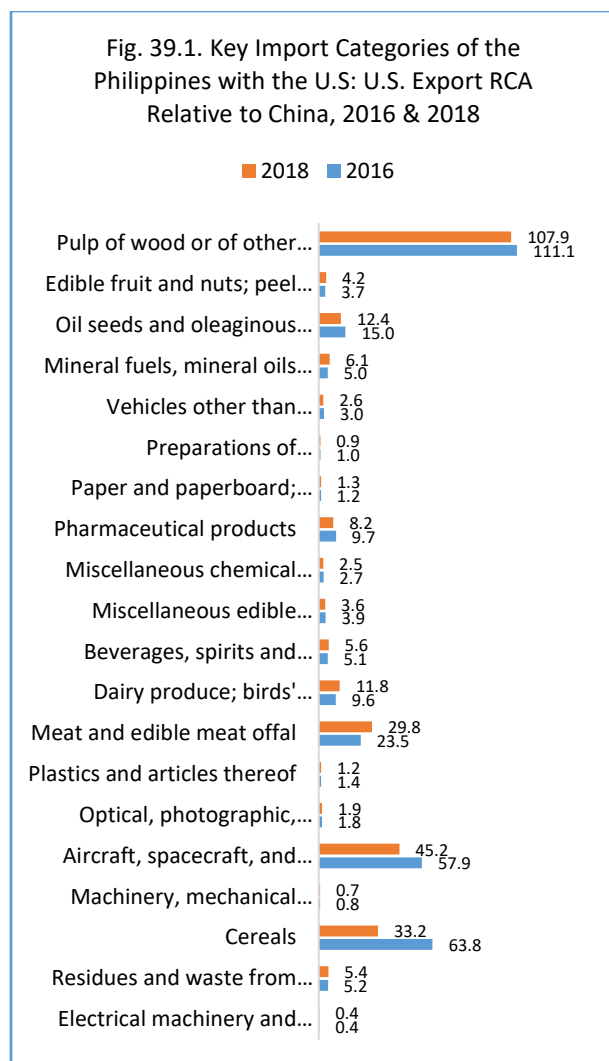
#### 4.3.2.2.3. Correlation of the Philippines' Import Intensity Indices with China and the U.S.

The Philippines' import intensities with China and the U.S. have very weak correlation, diverging in favor of China in six and nine import categories at two-digit HS code and four-digit HS code, respectively. The import intensity patterns of the Philippines with the two countries reflects the changes in the RCA patterns. The U.S. has comparative advantage with China in seven and fifteen of the 20 key export categories of the Philippines with the U.S. at two-digit HS code and four-digit HS code, respectively. Between 2016 and 2018, the U.S. has gained comparative advantage with China in seven and five of the 20 key export categories at two-digit HS code and four-digit HS code, respectively. The contrasting change in the Philippines' import intensities with China and the U.S. generally favors China on the back of China's comparative advantage gains with the U.S. (e.g., parts of aircraft, electronic integrated circuits, medicaments, and oscilloscopes). Similarly, the contrasting change in the Philippines' import intensities with the U.S. and China favors the U.S. in petroleum gas and meat and edible meat offal amid the U.S. comparative advantage gains with China. Reflecting the strong import ties of the Philippines with China, the country's import intensities with the U.S. and China have diverged in favor of China in electrical machinery sans any significant change in the U.S.

comparative advantage gains with China and in beverages, residues and wastes, optical equipment, and oilcake despite China's comparative advantage loss with the U.S. in said product categories. Inversely, the Philippines appears to have strong import ties with the U.S. in machines and mechanical appliances, prepared vegetables, and articles for the conveyance or packaging of goods with the country's import intensities with the U.S. and China diverging in favor the U.S. in these product categories despite the U.S. comparative advantage loss with China.



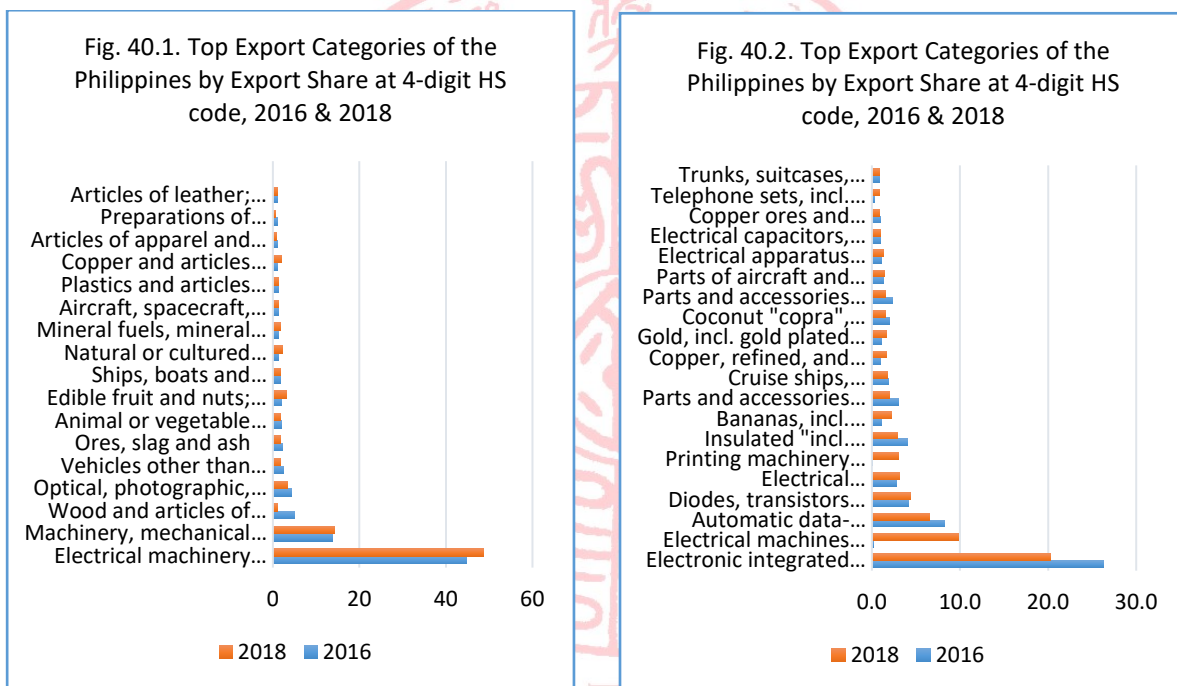




## 5. Re-evaluating the Philippines' Trade Relationship with Taiwan, China and the U.S

The Philippines has long struggled to effectively use trade as a development tool. As vertical specialization in Asia thrives, the Philippines finds itself increasingly engaged in GVC activities in medium-and high technology goods. But its participation in GVC activities remains relatively narrow and shallow compared to other ASEAN member states, such as Thailand and Malaysia. The Philippines specializes in the low-end segment of the GVC, i.e., assembly, testing, and packaging, and the manufacturing of less complex parts and components. Aside from electrical machinery, the strongest comparative advantage of the Philippines continues to lie mostly in primary products, such as edible fruits, nickel, animal or vegetable fats and oil, tobacco, and articles of leather, among others. Within ASEAN, the Philippines is placed in the same category as Indonesia and Vietnam in terms of product diversity, exhibiting an expansion in its export basket to include more complex products,

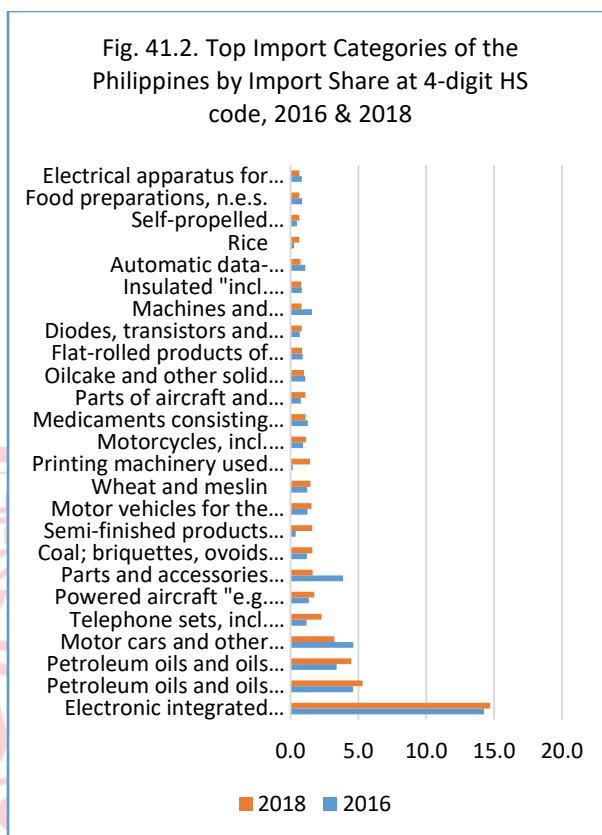
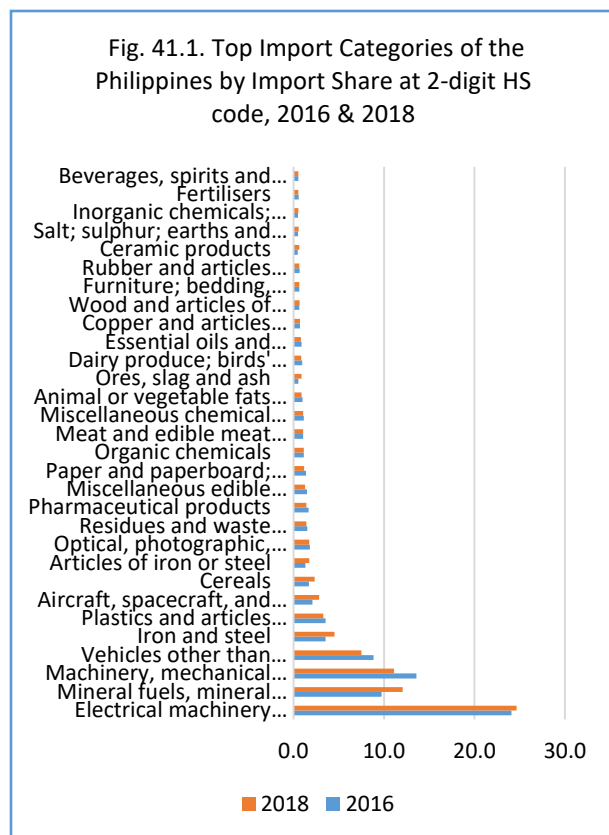
with moderate diversification away from primary resources.<sup>39</sup> The import portfolio of the Philippines cuts across market and product categories, including capital-and technology-intensive goods, such as electronic integrated circuits, motor cars, motorcycles, powered aircraft, semi-finished products of iron, and medicaments, and primary commodities (e.g., cereals, residues and waste, animal or vegetable fats and oils, meat and edible meat offal, and miscellaneous edible preparations). Imports also remain the main driver of consumption and exports of the Philippines. For example, the Philippine electronics industry, which represented over half of the country's total exports, sourced 80 percent of its components from abroad.<sup>40</sup> Aside from parts and components of electrical machinery, the country continues to display high import dependence in iron and steel, cereals, machinery and mechanical appliances, vehicles, aircraft and optical equipment. There are, however, indications that the Philippines along with the rest of the ASEAN member states are undergoing a "catch-up" process mainly in medium-technology industries.<sup>41</sup>



<sup>39</sup> Asian Development Bank, (October 2018), Building Complementarity and Resilience in ASEAN amid Global Uncertainty, *ADB Briefs*, No. 100, <https://www.adb.org/publications/asean-resilience-global-trade-uncertainty>

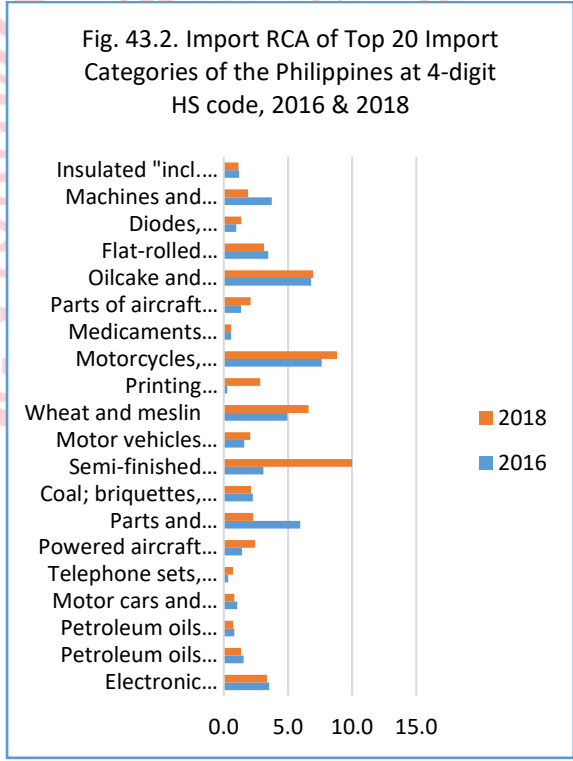
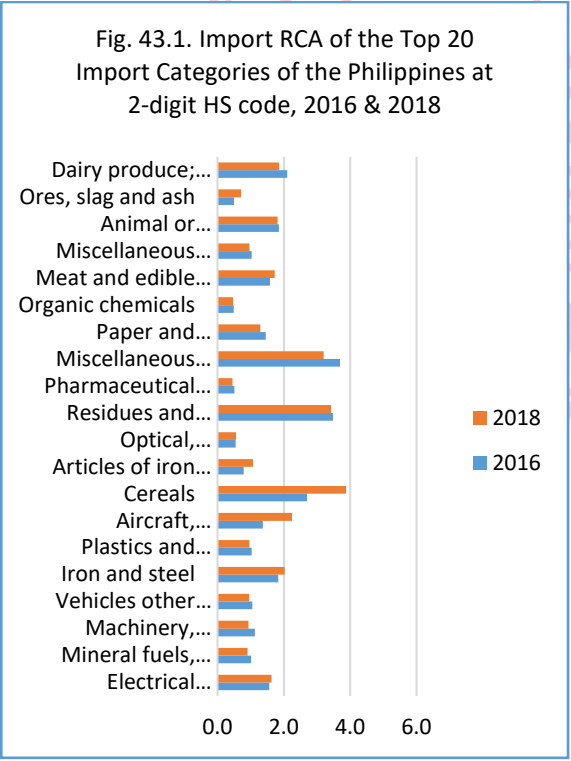
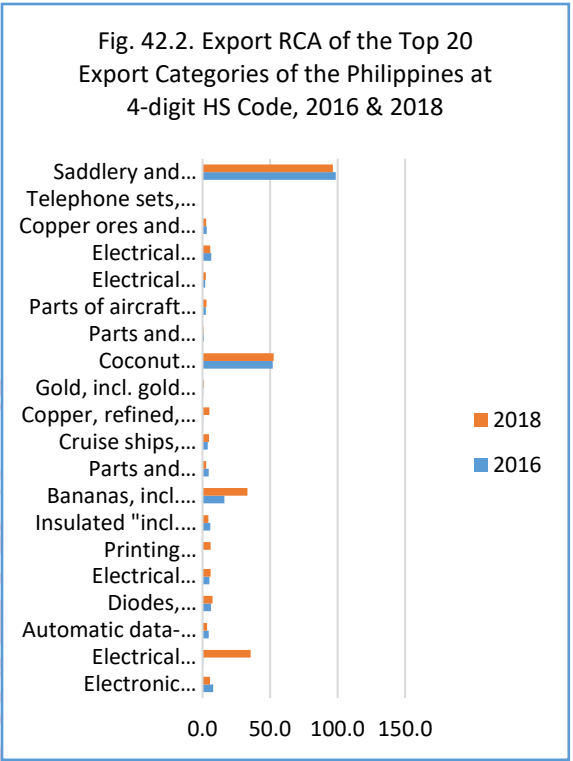
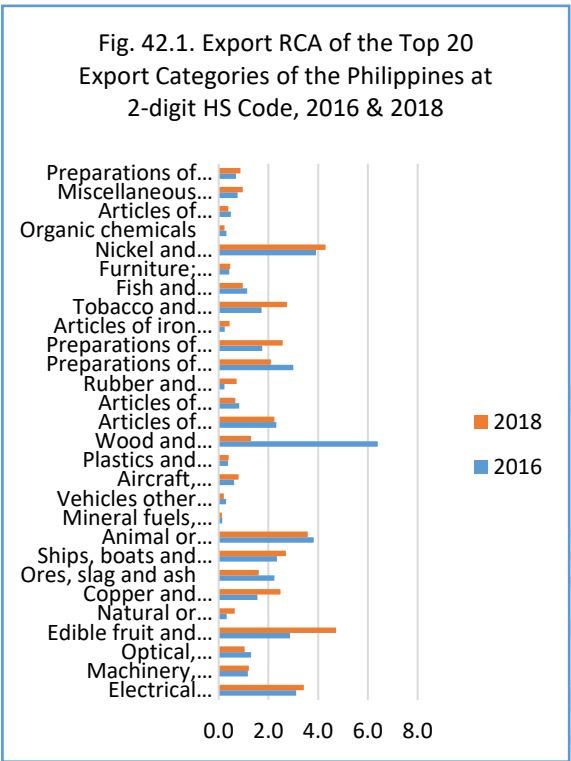
<sup>40</sup> S. Las Marias, (2019, December 4), A Look at the Current Philippine Electronics Manufacturing Landscape, *EET Asia*, <https://www.eetasia.com/a-look-at-the-current-philippine-electronics-manufacturing-landscape-part-2/>

<sup>41</sup> Asian Development Bank, (October 2018), <https://www.adb.org/publications/asean-resilience-global-trade-uncertainty>



The strong import specialization patterns of the Philippines across product categories has yielded an increasingly large trade deficit in agricultural and non-agricultural goods at US\$47.6 billion in 2018 compared to US\$29.6 billion in 2016. During said period, the imports of the Philippines have increased by leaps and bounds hitting US\$115.1 billion, while the growth of its export has decelerated, perching at US\$67.5 billion. The swelling trade deficit of the Philippines has transpired on the back of the Philippines' comparative advantage loss in several key export categories, such as optical equipment, ores and slag, animal or vegetable fats and oil, preparations of vegetables, articles of apparel, and wood and wood products. The Philippines, however, has made significant comparative advantage gains in edible fruits, tobacco, copper, preparations of meat, ships, explosives, nickel, and electrical machinery. At four-digit HS code, the Philippines has recorded significant comparative advantage gains in phosphosides, base metals, electrical machines, tungsten, and banana.

	2016	2017	2018
Export Value of the Philippines	56.3	63.2	67.5
Import Value of the Philippines	85.9	98.5	115.1
Trade Balance	-29.7	-35.3	-47.6
Raw Data Source: ITC			



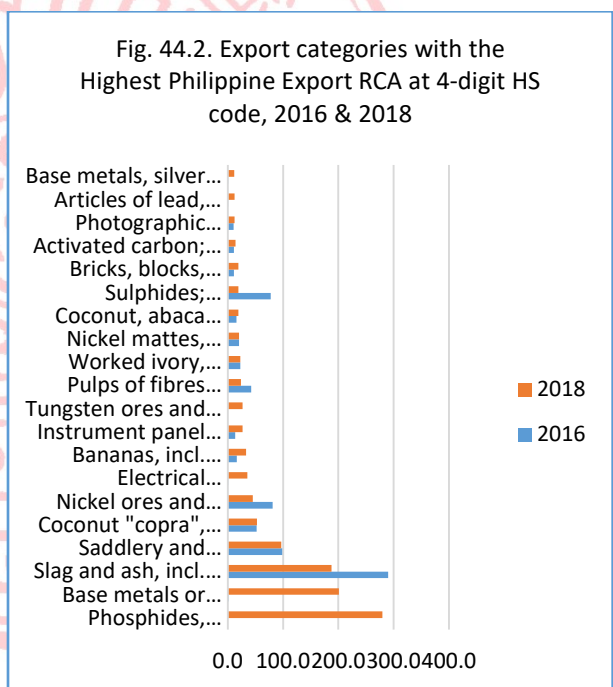
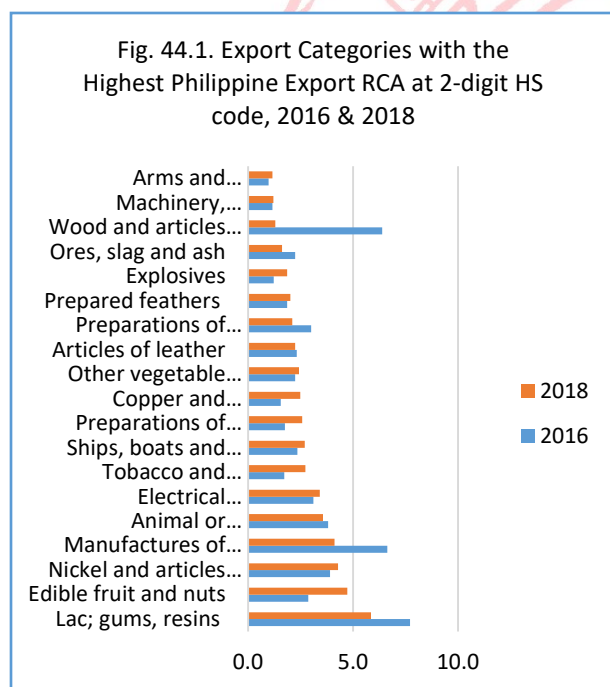


With the comparative advantage loss of the Philippines in several key export categories, the country has added only two new low-technology export lines to its export portfolio at two-digit HS code, i.e., wool, fine or coarse animal hair and cork and articles of cork between 2016 and 2018.

Commodity Aggregation Level	Number of Export Lines		HHI	
	2016	2018	2016	2018
Two-Digit HS Code	92	94	2281	2633
Four-Digit HS Code	949	989	866	635

Raw data source: ITC

With the growing dominance of electrical machinery, the value of Herfindahl-Hirschman concentration index (HHI) of the exports of the Philippines has significantly increased indicating growing export concentration. At four-digit HS code, the Philippines has added 40 new export lines but the HHI has significantly decreased suggesting increased vertical export diversification, i.e., export portfolio has diversified within the same sectors. The 40 new export lines include primary products (e.g., molybdenum ores and concentrates, salts of oxometallic, dolomites, aquatic invertebrates, and biodiesel) and parts and components (e.g., clock movements, machines and apparatus for the manufacture of semiconductor, and machinery parts, excluding parts containing electrical connectors).



As the Philippines' key trading partners and major global players in international trade, Taiwan, China and the U.S. crucially define the Philippines' trade route to development. Reflecting the differences in economic size and structure, and trade policies of Taiwan, China, and the Philippines, the dynamics of the Philippines' trading relationship with Taiwan, China, and the U.S. differ making it necessary to manage its economic engagement with the three countries. In its trade relationship with China, the Philippines has to wrestle with the challenges of a South-South trade involving a small developing country and a large emerging country. As a small, export-led industrialized country with an active

role in high-end GVCs<sup>42</sup>, particularly in the manufacture of medium-and high-technology intermediate goods, Taiwan's trading relationship with the Philippines offers strong potential of a dynamic vertical North-South trade that can mutually benefit both sides. The Philippines' trading relationship with the U.S., on other hand, is a North-South trade that offers vast export opportunities for industrial and consumer goods and affords access to high-technology intermediate inputs, including cutting-edge technology and services integral to enhancing export competitiveness.

**Table 8. Key Economic Indicators of the Philippines, Taiwan, China and the U.S., 2016 & 2018**

Countries	GDP (2010 Constant, USD Mil)		Annual Growth Rate (%)		Per Capita Income (Constant, USD)		Total Trade (In USD Billion)		Trade Openness	
	2016	2018	2016	2018	2016	2018	2016	2018	2016	2018
Philippines	284,371	322,301	6.9	6.2	2,743	3,022	142	183	50.0	56.6
Taiwan	531,281	589,997	1.5	2.6	22,592	25,026	511	622	95.6	105
China	11,137,946	13,608,152	6.7	6.6	6,884	7,753	3,686	4,629	33.2	34.0
U.S.	18,707,188	20,544,343	1.6	2.9	52,534	54,579	3,701	4,278	19.9	20.8

Sources: World Bank, Taiwan Statistical Data Book

### 5.1. Philippines-Taiwan Bilateral Trade

The Philippines' highly intense trade relations with Taiwan is reflective of various factors that draw them closer as trading partners. Although Taiwan is a much smaller country than the Philippines in terms of population size, its people, on the average, have a purchasing power roughly eight times that of the Philippines, making it not just a lucrative export market for high-value goods, but also an important source of greenfield investments and a major provider of high-quality jobs for Filipinos working in Taiwan and the Philippines. With Taiwan's active role in the global supply chain in high-tech industries, the Philippines maintains a strong vertical intra-industry trade ties with Taiwan as indicated by a relatively high value of Grubel-Lloyd (GL) intra-industry trade index of their bilateral trade, particularly in diodes, transistors and similar semiconductor devices, electrical transformers and insulated wire and cable.

<sup>42</sup>S. Chen and D. Liu, (2000 January), Taiwan's active role in the global production network, In *Weathering the Storm*, edited by P. Chow, B. Gill, Brookings Institution Press, pp.169-187.

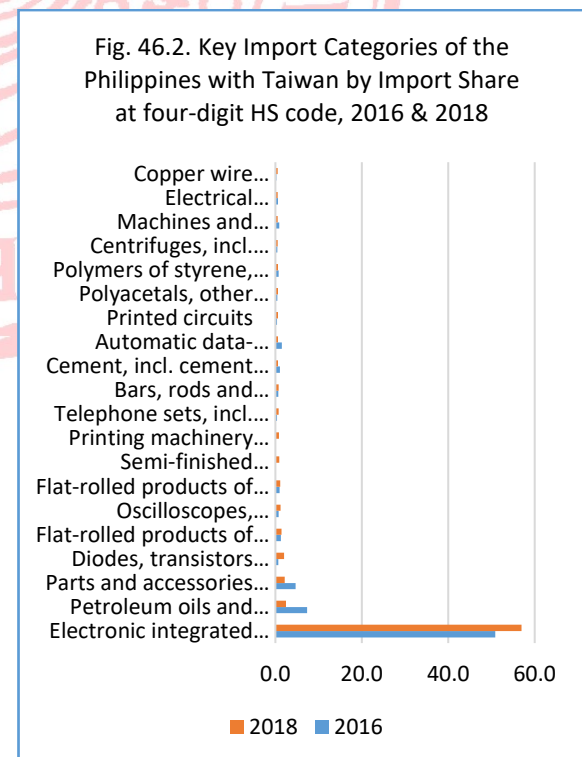
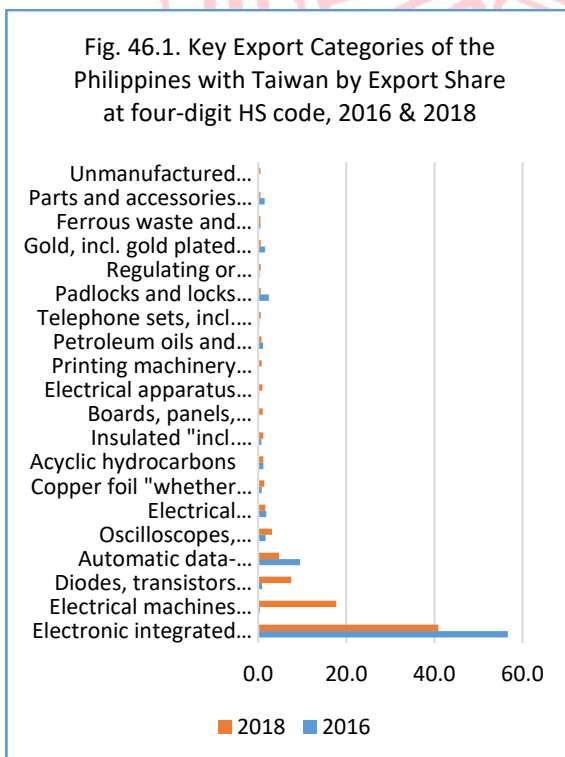
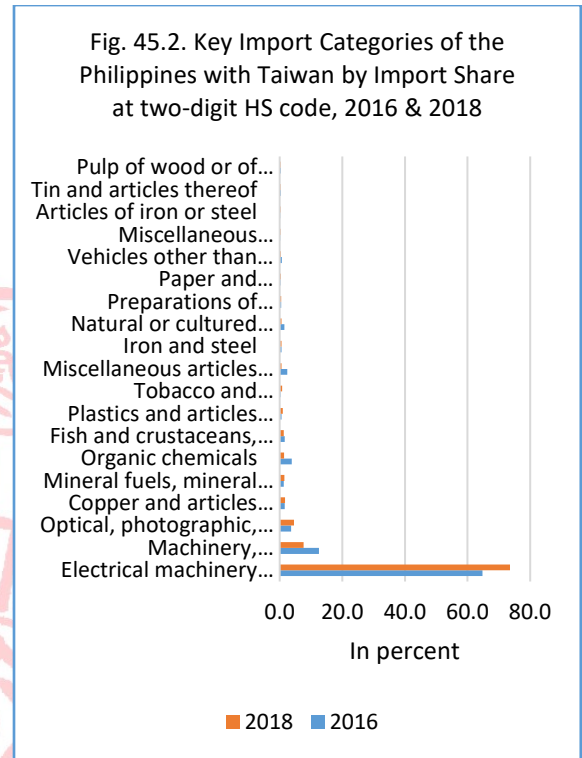
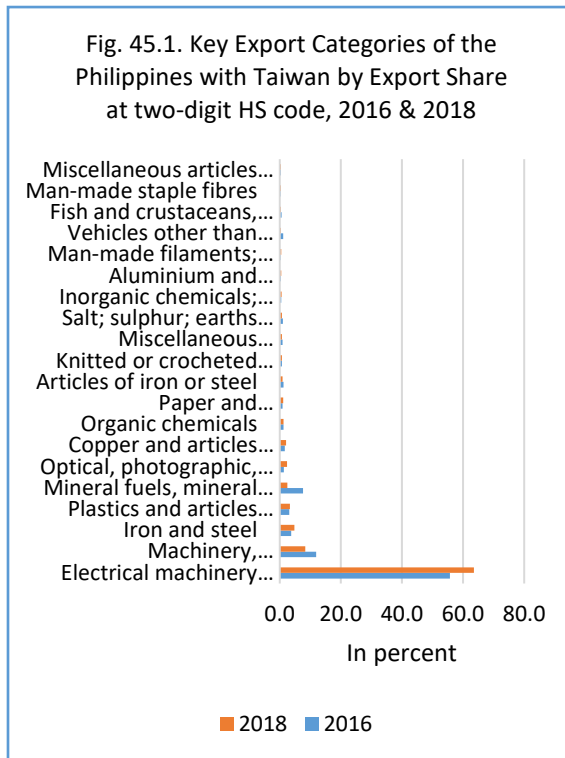
Product Categories	2016	2018
Trade-weighted Grubel-Lloyd Indices	0.40	0.36
Electronic integrated circuits; parts thereof	0.60	0.47
Electrical machines and apparatus, having individual functions, n.e.s. in chapter 85 and parts ...	0.61	0.02
Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, ...	0.69	0.78
Petroleum oils and oils obtained from bituminous minerals (excluding crude); preparations containing ...	0.11	0.23
Automatic data-processing machines and units thereof; magnetic or optical readers, machines ...	0.57	0.47
Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking ...	0.93	0.96
Parts and accessories (other than covers, carrying cases and the like) suitable for use solely ...	0.21	0.19
Flat-rolled products of iron or non-alloy steel, of a width >= 600 mm, hot-rolled, not clad, ...	0.00	0.00
Electrical transformers, static converters, e.g. rectifiers, and inductors; parts thereof	0.91	0.88
Printing machinery used for printing by means of plates, cylinders and other printing components ...	0.13	0.62
Flat-rolled products of iron or non-alloy steel, of a width of >= 600 mm, cold-rolled "cold-reduced", ...	0.00	0.00
Telephone sets, incl. telephones for cellular networks or for other wireless networks; other ...	0.36	0.51
Semi-finished products of iron or non-alloy steel	0.00	0.00
Insulated "incl. enamelled or anodised" wire, cable "incl. coaxial cable" and other insulated ...	0.85	0.90
Printed circuits	0.64	0.53
Bars, rods and profiles, of copper, n.e.s.	0.00	0.00
Copper foil "whether or not printed or backed with paper, paperboard, plastics or similar backing ...	0.43	0.29
Machines and mechanical appliances having individual functions, not specified or included elsewhere ...	0.16	0.31
Cement, incl. cement clinkers, whether or not coloured	0.00	0.00
Copper wire (excluding surgical sutures, stranded wire, cables, plaited bands and the like ...	0.31	0.30
Raw data source: ITC; Authors' computation		

The wide per capita income gap and technological disparities between the Philippines and Taiwan have supported a dynamic, complementary bilateral trade relationship. The Philippines' bilateral trade with Taiwan is increasingly specialized in trade in parts and components of electrical machinery. Electrical machinery accounts for over 60 percent of the Philippines' exports with Taiwan, and over 70 percent of its imports with Taiwan in 2018, significantly higher than in 2016. With increased specialization in electrical machinery, the number of export lines of the Philippines' with Taiwan has slightly declined at the two-digit HS code, but eight new export lines are added to its export bundle with Taiwan (e.g.,

Table 10. Level of Export Diversification of the Philippines with Taiwan, 2016 & 2018

Level of Commodity Aggregation	Number of Export Lines, 2016 & 2018		HHI	
	2016	2018	2016	2018
Two-digit HS code	82	80	4396	5494
Four-digit HS code	408	416	3338	2092
Raw data source: ITC; Authors' computation				

molybdenum ores and concentrates, polyamides, salts of inorganic acids, motorcycles, and salts of oxometallic) at four-digit HS classification. This is reflected in decreased HHI indicating increased diversification within the same sector.



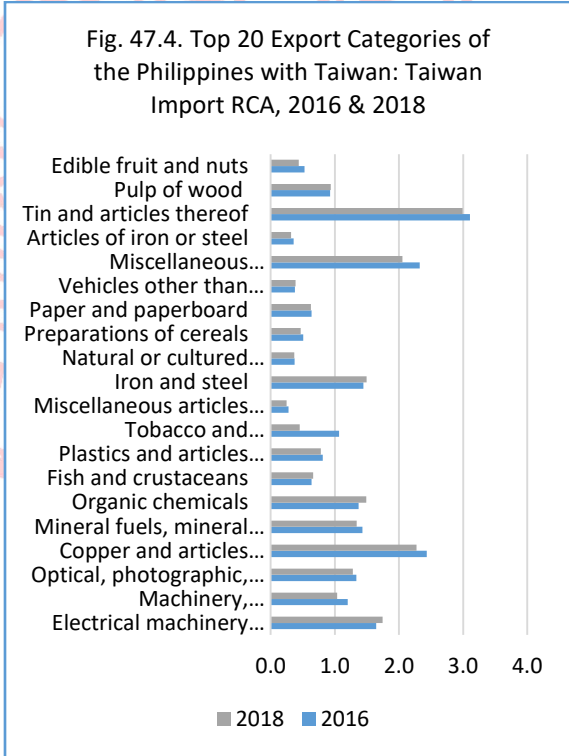
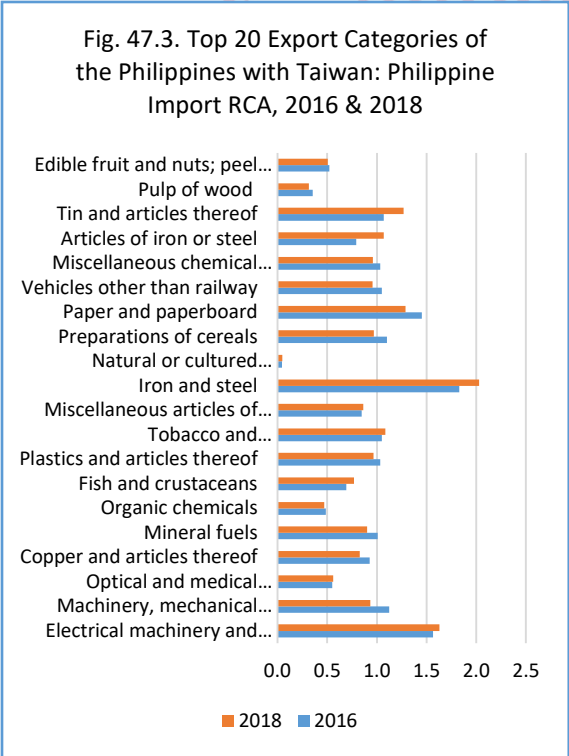
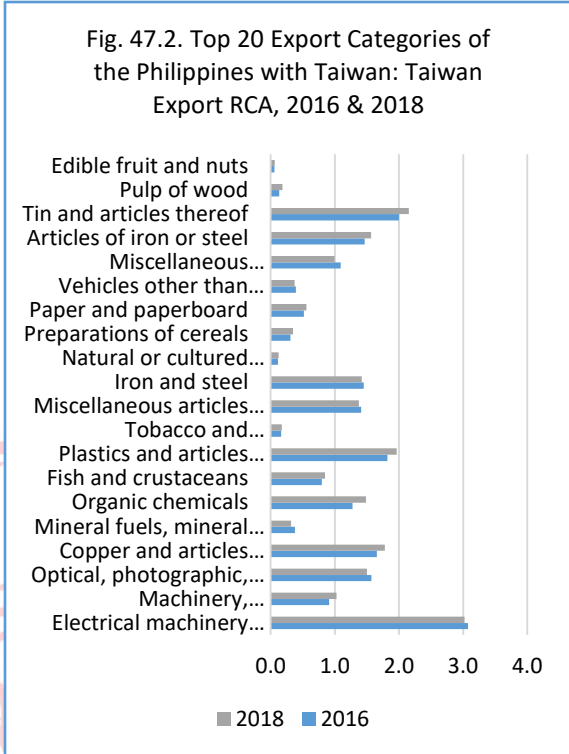
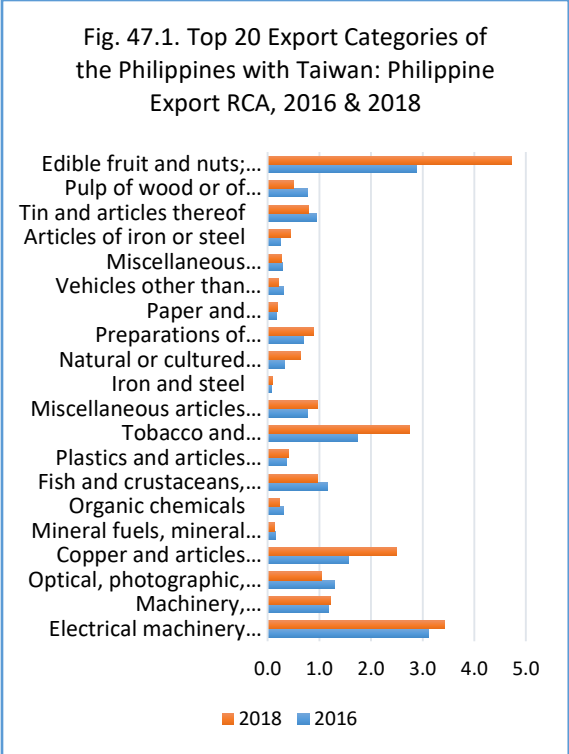


### 5.1.1. Philippines' GVC-based Complementary Export Relations with Taiwan

The Philippines maintains a complementary GVC-based export relations with Taiwan where it specializes in the low-end segment (i.e., assembly, packaging and testing activities, production of less complex parts and components, and supply of raw materials) complementing Taiwan's comparative advantage in high-end manufacturing. Both the Philippines and Taiwan have a comparative advantage in the top four export categories of the Philippines with Taiwan, i.e., electrical machinery, machinery and mechanical appliances, optical equipment, and copper with the export RCA of the Philippines higher than Taiwan's export RCA in all of these export categories, except optical equipment. Reflecting Taiwan's participation in high-end GVC activities, Taiwan has a higher average export RCA and a higher average import RCA than the Philippines in this product group.

Trading Partner	Average Export RCA of the Philippines		Average Export RCA of the Trading Partner		Average Import RCA of the Philippines		Average Import RCA of Trading Partner	
	2016	2018	2016	2018	2016	2018	2016	2018
Taiwan	1.14 (0.89)	1.24 (1.08)	1.44 (0.77)	1.49 (0.76)	0.92 (0.33)	0.88 (0.33)	1.36 (0.51)	1.33 (0.49)
China	1.34 (1.05)	1.55 (1.47)	0.72 (0.55)	0.74 (0.57)	0.88 (0.34)	0.85 (0.32)	1.69 (1.42)	1.62 (1.27)
US	1.62 (1.14)	1.78 (1.31)	1.00 (1.05)	1.01 (1.14)	0.77 (0.51)	0.83 (0.61)	1.17 (0.37)	1.21 (0.37)

Note: Key export categories are those with export share in total exports of the Philippines with Taiwan, China, and the U.S.  $\geq 1\%$   
( ) standard deviation

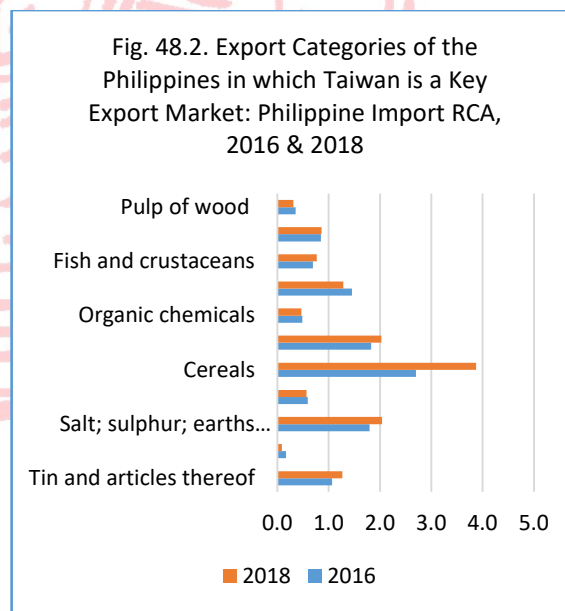
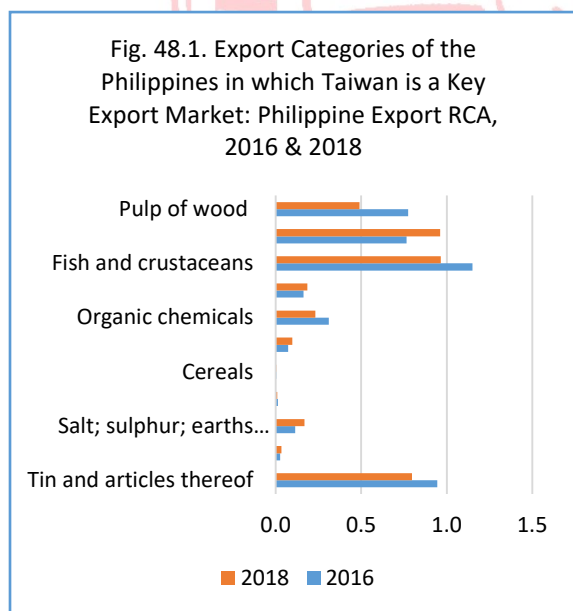


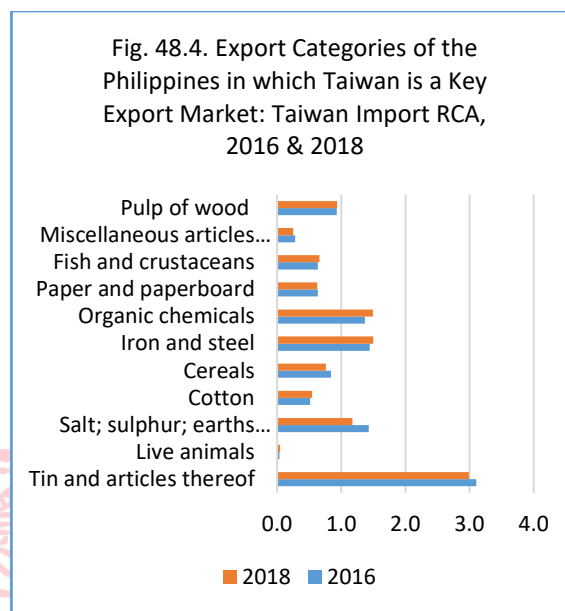
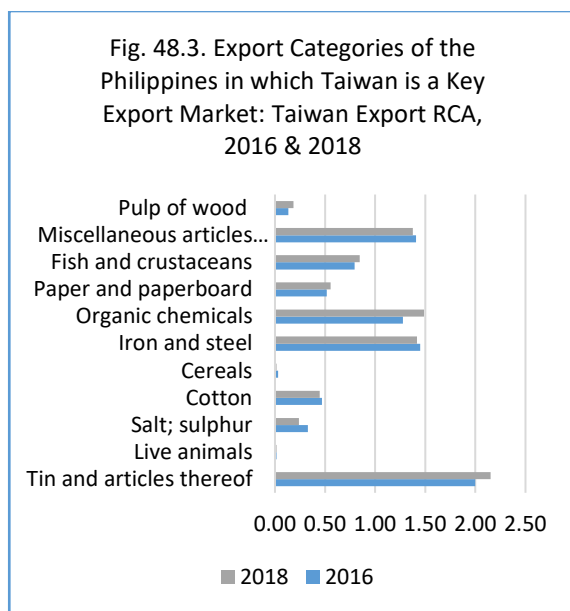
The investment-driven vertical intra-industry trade between Taiwan and the Philippines is rather evident in product categories in which Taiwan is a key export market to the Philippines. Both the

Philippines and Taiwan have a comparative disadvantage in majority of these product categories with Taiwan's average export RCA higher than the Philippines' average export RCA. Concomitantly, both countries have strong import specialization patterns in majority of these product categories with Taiwan's average import RCA higher than the average import RCA of the Philippines. The RCA patterns suggest that the Philippines exports primary goods (e.g., cereals, live animals, cotton, fish and crustaceans, salt and pebbles and iron and steel) for further processing into higher value goods in Taiwan.

Trading Partner	Ave. Export RCA of the Philippines		Ave. Export RCA of the Trading Partner		Ave. Import RCA of the Philippines		Ave. Import RCA of Trading Partner	
	2016	2018	2016	2018	2016	2018	2016	2018
Taiwan	0.39 (0.41)	0.36 (0.36)	0.77 (0.64)	0.79 (0.68)	1.09 (0.74)	1.23 (1.04)	1.02 (0.79)	1.00 (0.77)
China	1.07 (0.90)	1.12 (1.34)	0.94 (0.77)	1.08 (0.94)	0.92 (0.66)	0.83 (0.66)	1.43 (1.37)	1.31 (1.24)
US	1.07 (1.73)	0.92 (1.30)	1.01 (1.11)	1.07 (1.26)	0.72 (0.54)	0.76 (0.55)	1.13 (0.68)	1.16 (0.69)

Note: (i) Taiwan is a key export market for those with export product share by product  $\geq 6\%$   
(ii) China is a key export market for those with export product share by product  $\geq 19\%$   
(iii) U.S. is a key export market for those with export product share by product  $\geq 20\%$   
() standard deviation





Reflecting the vertical specialization patterns of the Philippines' trade with Taiwan, the country maintains a large trade deficit with Taiwan. Of the top 10 export categories of the Philippines with Taiwan, the Philippines incurs a trade deficit with Taiwan in eight export categories (i.e., electrical machinery, machinery and mechanical appliances, copper, organic chemicals, miscellaneous articles of base metal, plastics, iron and steel, and mineral fuels). The trade balance of the Philippines with Taiwan in most of these export categories, however, has improved with the largest improvement recorded in machinery and mechanical appliances, vehicles, articles of iron and steel, and mineral fuels. Although the Philippines' trade deficit with Taiwan in electrical machinery has increased, its trade surplus with the world in said product category has slightly improved. Indicating mutual gains from vertical specialization, the average export RCA of both the Philippines and Taiwan have increased, while their average import RCA have decreased in this product group. In export categories in which Taiwan is a key export market of the Philippines, however, the Philippines' comparative disadvantage has increased and Taiwan's comparative disadvantage has decreased in majority of these product categories. Reduced export specialization of the Philippines in these product categories, however, may be desirable as most of these product categories are primary goods (i.e., tin, fish and crustaceans, and pulp of wood).

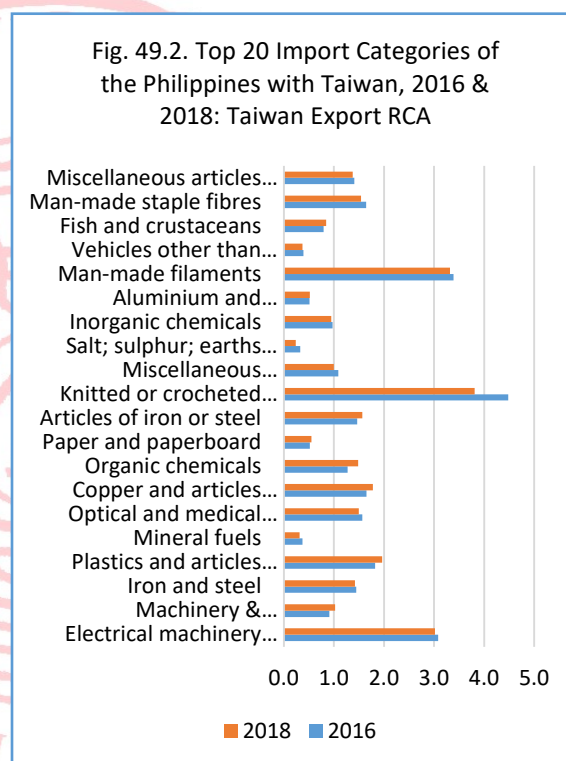
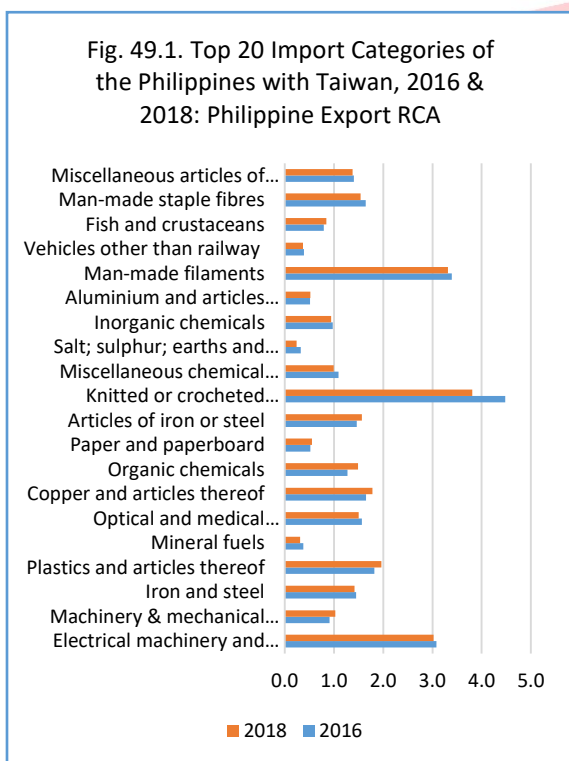
### 5.1.2. Dynamics of the Philippines' Complementary Import Relations with Taiwan

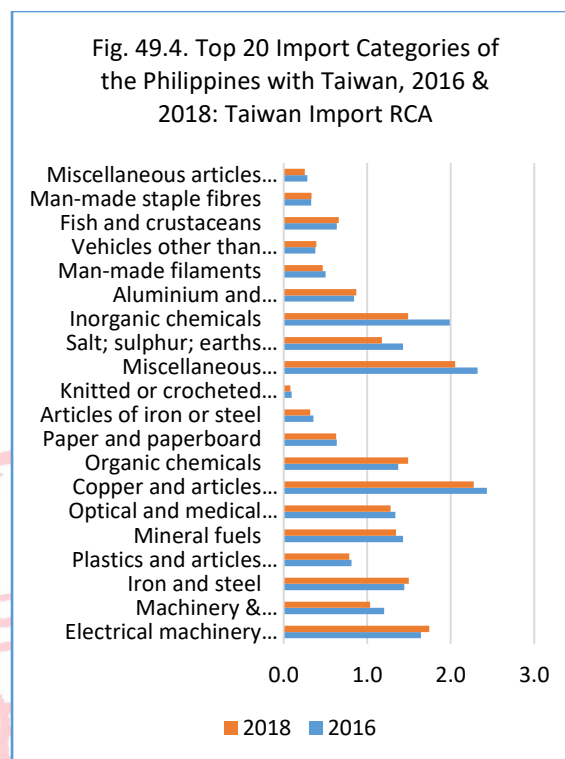
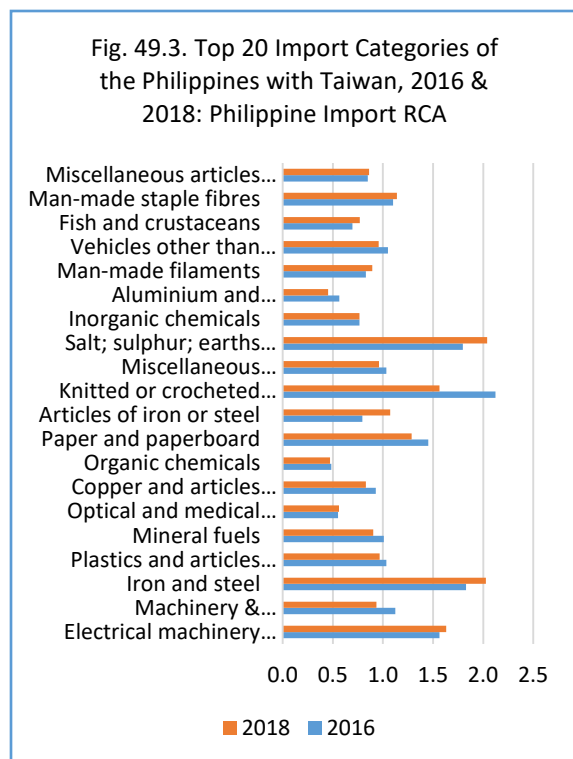
Reflecting the strong vertical intra-industry trade linkage of Taiwan and the Philippines, both countries have a comparative advantage in eight export categories (e.g., electrical machinery, machinery and mechanical appliances, optical and medical instruments, plastics, articles of iron and steel, iron and steel, copper, organic chemicals) of the top 10 import categories of the Philippines with Taiwan. The average export RCA and average import RCA of Taiwan is higher than the Philippines in this product group reflecting the role of the Philippines as an export platform for Taiwanese companies.



Trading Partner	Ave. Export RCA of the Philippines		Ave. Export RCA of the Trading Partner		Ave. Import RCA of the Philippines		Ave. Import RCA of Trading Partner	
	2016	2018	2016	2018	2016	2018	2016	2018
Taiwan	0.91 (0.94)	1.02 (1.12)	1.41 (0.76)	1.45 (0.75)	1.11 (0.42)	1.07 (0.47)	1.37 (0.48)	1.34 (0.47)
China	1.11 (1.64)	0.95 (1.26)	1.36 (0.87)	1.37 (0.88)	0.98 (0.46)	1.07 (0.57)	0.78 (0.53)	0.77 (0.50)
US	0.72 (0.93)	0.64 (0.88)	1.38 (0.86)	1.42 (0.93)	1.52 (0.92)	1.56 (1.01)	0.81 (0.41)	0.85 (0.42)

Note: Key import categories are those with import share of Taiwan, China and the U.S. in total imports of the Philippines  $\geq 1\%$   
 () standard deviation





The import relations of the Philippines with Taiwan in product categories in which Taiwan is its key import supplier have shown to be highly complementary. These include intermediate goods and raw materials in which Taiwan has a strong comparative advantage and the Philippines has a comparative disadvantage (e.g., electrical machinery, copper, optical equipment, organic chemicals, knitted or crocheted fabrics, special woven fabrics, man-made staple fiber and salt and pebbles). The Philippines has a high average import RCA and Taiwan has a remarkably high average export RCA in majority of these product categories (i.e., special woven fabrics, wadding and knitted and crocheted fabrics and man-made staple fiber).

**Table 14. RCA Profiles of Import Categories of the Philippines in which Taiwan, China, and the U.S. are Key Import Sources**

Trading Partner	Ave. Export RCA of the Philippines		Ave. Export RCA of the Trading Partner		Ave. Import RCA of the Philippines		Ave. Import RCA of Trading Partner	
	2016	2018	2016	2018	2016	2018	2016	2018
Taiwan	0.87 (1.03)	0.96 (1.21)	2.40 (1.25)	2.24 (1.09)	1.28 (0.68)	1.27 (0.55)	0.78 (0.77)	0.77 (0.74)
China	0.92 (1.65)	0.78 (1.20)	2.00 (1.30)	2.05 (1.33)	0.83 (0.60)	0.84 (0.60)	0.50 (0.37)	0.49 (0.40)
US	0.76 (0.93)	0.85 (1.24)	1.78 (1.22)	1.78 (1.29)	1.12 (0.89)	1.29 (1.08)	0.89 (0.63)	0.88 (0.56)

Note: (i) Taiwan is a key import source for those with export product share by product  $\geq 8\%$   
(ii) China is a key import source for those with export product share by product  $\geq 20\%$   
(iii) U.S. is a key import source for those with export product share by product  $\geq 15\%$   
() standard deviation

Fig. 50.1. Import Categories of the Philippines in which Taiwan is a Key Import Supplier: Philippine Export RCA, 2016 & 2018

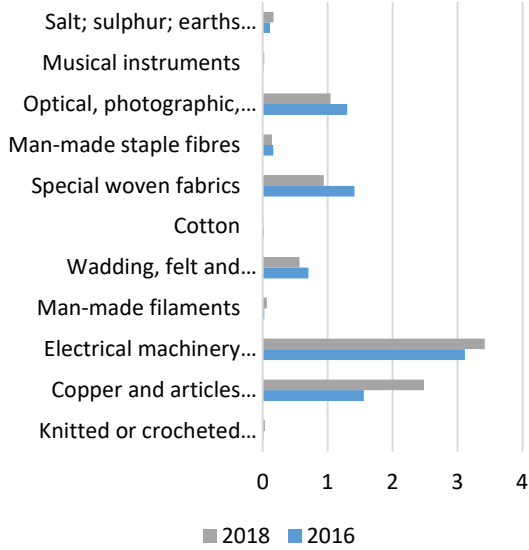


Fig. 50.2. Import Categories of the Philippines in which Taiwan is a Key Import Supplier: Taiwan Export RCA, 2016 & 2018

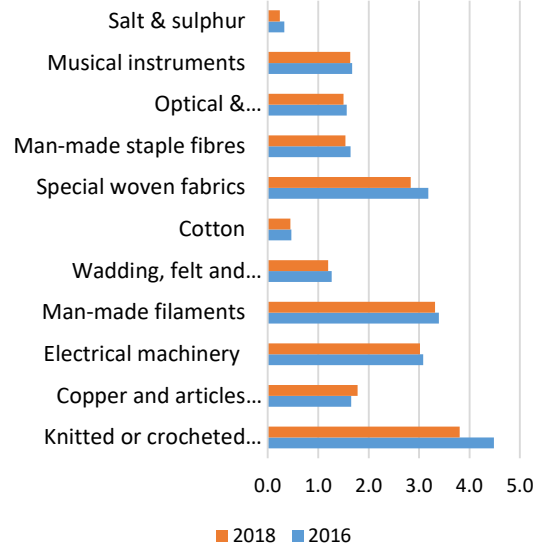


Fig. 50.3. Import Categories of the Philippines in which Taiwan is a Key Import Supplier: Philippine Import RCA, 2016 & 2018

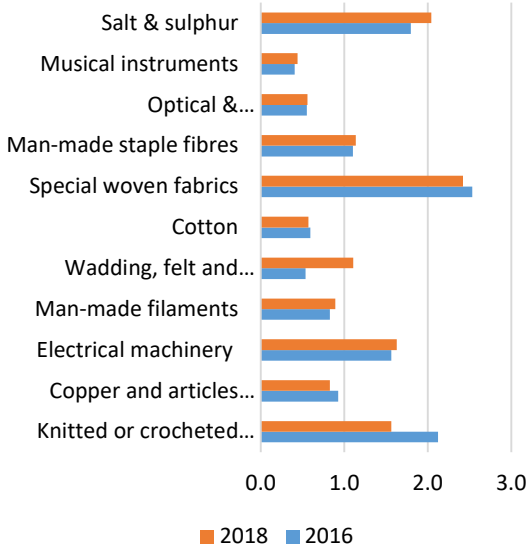
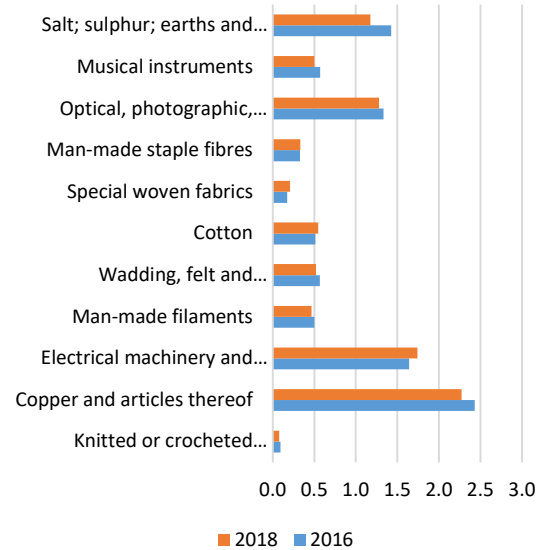


Fig. 50.4. Import Categories of the Philippines in which Taiwan is a Key Import Supplier: Taiwan Import RCA, 2016 & 2018



Reflecting the relative positioning of Taiwan and the Philippines in the GVCs, the Philippines incurs a huge trade deficit with Taiwan in all of its key import categories with Taiwan. But the trade balance of the Philippines with Taiwan in most of these key import categories has improved. This ensued on the back of a slight decrease in the average import RCA of the Philippines and Taiwan (e.g., machinery and mechanical appliances, plastics, mineral fuels, copper, paper products, knitted or crocheted fabrics, and miscellaneous chemical products) and a limited improvement in their average export RCA (e.g., machinery and mechanical appliances, plastics, copper, and paper products) indicating comparative advantage gains from vertical specialization on both sides. For import categories in which Taiwan is a key import source of the Philippines, Taiwan's average export RCA has declined, albeit it is still remarkably high, while the Philippines' average export RCA has increased and its import RCA has slightly declined. The decreasing but still high average export RCA of Taiwan in these products indicates that Taiwan remains an efficient source of imports, but it is slowly shifting away from these low technology product categories.

### *5.1.3. Advancing the Complementary Trade Policy Goals of the Philippines and Taiwan*

The Philippines and Taiwan have shown to mutually benefit from their vertical intra-industry trade linkages, particularly in medium-and high-technology goods, making it imperative for the two countries to maintain their intense trade and investment relations. While the mutually beneficial vertical intra-industry trade linkages in electrical machinery would have to be further promoted to enhance the dynamic gains from trade, there is also a wide room for expanding the two countries' trade and investment ties beyond medium-and high-technology goods. Taiwan is becoming an increasingly favored trading partner of the Philippines in a few light manufactures and agricultural products reflecting the reshoring of manufacturing activities from China to Taiwan and the growing attractiveness of the Philippines as an export platform for Taiwanese companies amid the U.S.-China trade conflict and rising labor cost in China. Most of the high performing imports of the Philippines from Taiwan are agricultural products and light manufactures (e.g., tobacco, cork, products of animal origin, other vegetable textile fiber, prepared feathers, footwear, natural or cultured pearls, musical instruments, edible vegetables, oilseeds, wadding and cocoa). The country's high-performing exports to Taiwan are also mostly light manufactures and agricultural products and a few intermediate goods (e.g., ores and slag, man-made filaments, cotton, products of the milling industry, articles of apparel, rubber, miscellaneous manufactured articles, made-up textile articles, and edible vegetables, arms and ammunitions, carpets, cereals, cork, fertilizers, footwear, lead, meat and edible meat offal, musical instruments, rubber, and railway).

With the growing importance of light manufactures and agricultural products in the bilateral trade of the Philippines with Taiwan, a closer ties between two countries presents vast opportunities for product and market diversification consistent with the aspirations of the Philippines to broaden its manufacturing base and for Taiwan to reduce economic reliance on China as embodied in Taiwan's New Southbound Policy. Taiwan's government has identified the Philippines as one of its priority markets and rightly so. Aside from its strong relations with the U.S., the Philippines has actively engaged traditional and non-traditional trading partners through various economic cooperation agreements making it a gateway for Taiwanese enterprises to ASEAN markets and beyond. Taiwanese companies can capitalize on the high trade complementarity of the Philippines with other



ASEAN member states, particularly Malaysia, Singapore and Thailand.<sup>43</sup> On the side of the Philippines, deeper trade and investment linkages with Taiwan would help the country further integrate into GVCs and expand its exporting capacity to take full advantage of the U.S. GSP and all its bilateral and regional trade agreements.

As a broad policy guide, trade and investment cooperation agreements between Taiwan and the Philippines may prioritize sectors based on the following criteria:

- (i) *Complementary trading relationship.* Strengthening trade and investment ties in sectors where Taiwan, as the exporting country, has a high export RCA index and the Philippines, as the importing country, either has a high import RCA or a low export RCA and vice-versa entails minimal structural adjustment cost and significant mutual gains. Product categories in which Taiwan and the Philippines have a high level of trade complementarity but trade intensity is low may be prioritized in trade and investment promotion.
- (ii) *Special trading relationship.* Trade in product categories in which Taiwan and the Philippines have high trade intensity or growth rates signifies partner-specific complementarities arising from geographic, political and cultural proximity and policy preferences and thus must be exploited. Products with high value-addition may be prioritized.
- (iii) *Complementarity with the Philippines' bilateral trade structure with China.* Given the Chinalization of Philippine trade, trade and investment promotion strategies may also target sectors that complement the Philippines' bilateral trade with China or those where Taiwan has a much stronger comparative advantage than China.

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<sup>43</sup> Asian Development Bank, (October 2018), Building Complementarity and Resilience in ASEAN amid Global Uncertainty, *ADB Briefs*, No. 100, <https://www.adb.org/publications/asean-resilience-global-trade-uncertainty>

## Identification Criteria for Priority Sectors for Philippines-Taiwan Bilateral Investment and Trade Promotion

**Complementary trade relationship:** export supply matches import demand

- **Complementary exports of the Philippines with Taiwan:** Nickel, electrical machinery, machinery and mechanical appliances, copper, optical equipment, animal or vegetable fats and oils, articles of leather, edible fruits, explosives, lac, lead, manufactures of straw, ores and slag, other vegetable textile fiber, preparations of meat and fish, ships, soap
- **Complementary exports of Taiwan with the Philippines:** Knitted or crocheted fabrics, electrical machinery, special woven fabrics, impregnated textile fabrics, tin, plastics, articles of iron and steel, man-made staple fibers, iron and steel, albuminoidal substances, wadding, tanning or dyeing extract, machinery and mechanical appliances, miscellaneous chemical products

**High-performing sectors:** Sectors that have high trade growth rates and intensity index

- **High-performing export categories of the Philippines with Taiwan :** Ores and slag, man-made filaments, cotton, products of the milling industry, articles of apparel, rubber, railway, miscellaneous manufactured articles, other made-up textile articles, impregnated textile fabrics, edible vegetables, aluminum, works of arts, live animals, miscellaneous articles of base metal, cereals, paper and paperboard, tin, salt, headgear, preparation of cereals
- **High-performing import categories of the Philippines with Taiwan:** tobacco, cork, other vegetable textile fiber, prepared feathers, live trees, footwear, natural or cultured pearls, photographic and cinematographic equipment, wadding, cocoa, sugars, preparation of vegetable and fruits, animal or vegetable fats and oils, carpets, pharmaceutical products, footwear

**Complementarity with the Philippines' bilateral trade structure with China**

- **China-complementary Export Interest of the Philippines with Taiwan:** Photographic, zinc, products of animal origin, miscellaneous chemical products, lead, tobacco, paper, tin, miscellaneous articles of base metal, and iron and steel, live animals, miscellaneous articles of base metal, cotton, and cereals
- **China-complementary Import interest of the Philippines with Taiwan:** Copper, carpets and other textile floor coverings, salt, cotton, other vegetable textile fibers, paper yarn, tin, photographic equipment, electrical machinery, nickel, plastics, raw hides

### 5.2. Philippines-China Bilateral Trade

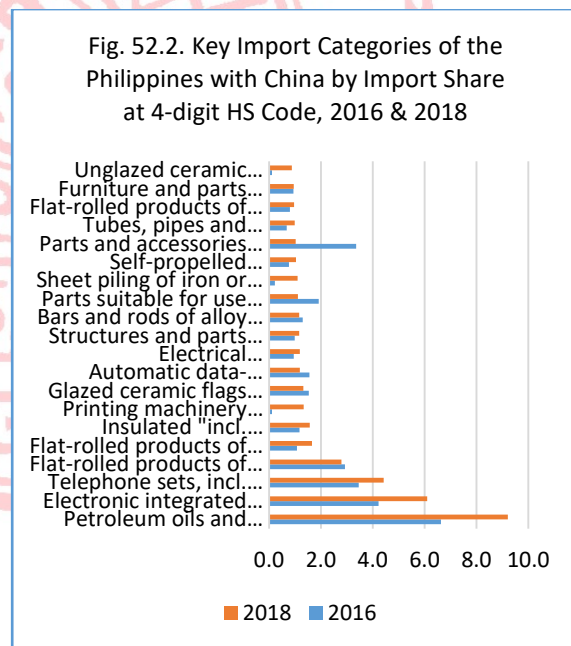
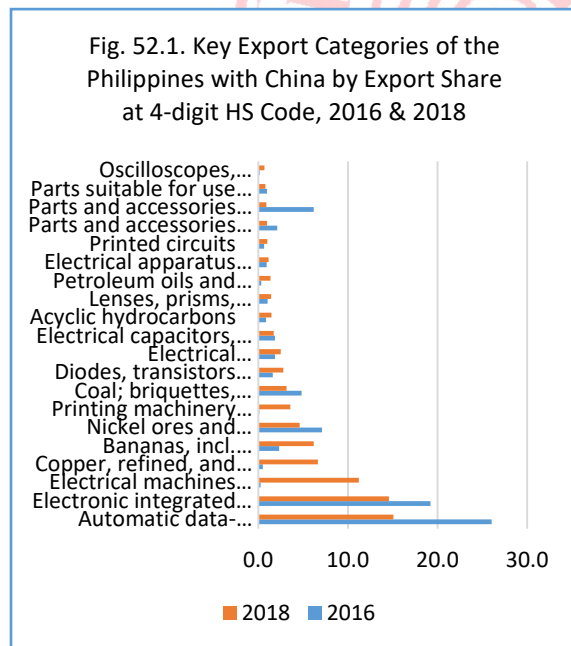
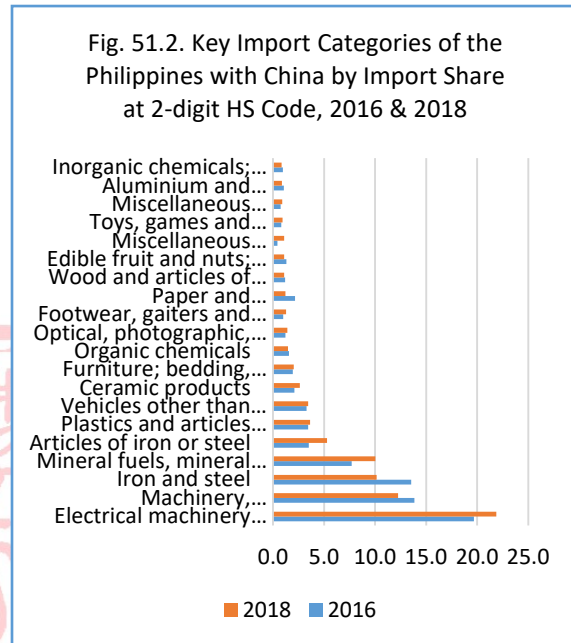
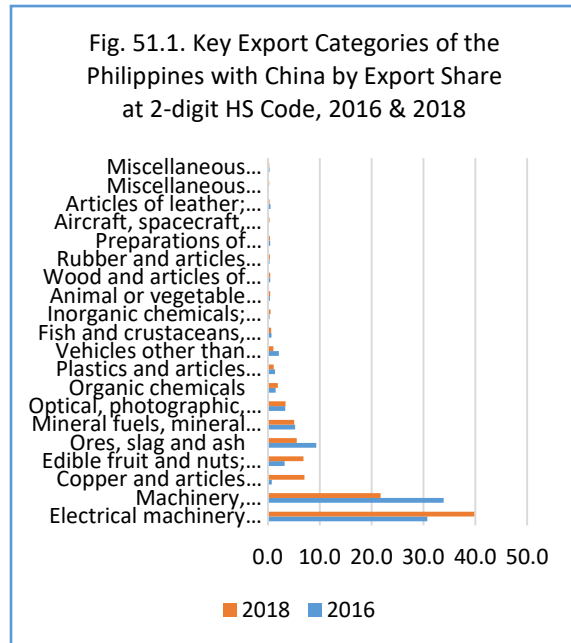
The rise of China as a manufacturing powerhouse and the center of much of the global production-sharing activities has encouraged many Asian countries, including the Philippines, to strengthen trade ties with the Asian economic giant through bilateral and regional trade agreements. This has spawned a China-centric regional production network. Between 2016 and 2018, the GL index of the Philippines' trade with China has slightly improved, albeit still lower relative to other Asian economies that have more complementary trade structures with China. The vertical intra-industry trade between the two countries is particularly high in electronic integrated circuits, electrical transformers, diodes, transistors, and similar semiconductor devices, electrical apparatus and electrical capacitors. There is

also a marked increase in the GL index of their trade in oscilloscopes and parts and accessories for tractors and motor vehicles.

Product Categories	2016	2018
Trade-weighted Grubel-Lloyd Indices	0.22	0.25
Automatic data-processing machines and units thereof; magnetic or optical readers, machines ...	0.27	0.34
Electronic integrated circuits; parts thereof	0.72	0.96
Electrical machines and apparatus, having individual functions, n.e.s. in chapter 85 and parts ...	0.86	0.08
Copper, refined, and copper alloys, unwrought (excluding copper alloys of heading 7405)	0.13	0.01
Bananas, incl. plantains, fresh or dried	0.00	0.00
Nickel ores and concentrates	0.00	0.00
Printing machinery used for printing by means of plates, cylinders and other printing components ...	0.57	0.98
Coal; briquettes, ovoids and similar solid fuels manufactured from coal	0.00	0.00
Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, ...	0.72	0.83
Electrical transformers, static converters, e.g. rectifiers, and inductors; parts thereof	0.86	0.90
Electrical capacitors, fixed, variable or adjustable "pre-set"; parts thereof	0.79	0.93
Acyclic hydrocarbons	0.00	0.01
Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of ...	0.28	0.36
Petroleum oils and oils obtained from bituminous minerals (excluding crude); preparations containing ...	0.04	0.11
Electrical apparatus for switching or protecting electrical circuits, or for making connections ...	0.83	0.90
Printed circuits	0.89	0.86
Parts and accessories for tractors, motor vehicles for the transport of ten or more persons, ...	0.62	0.80
Parts and accessories (other than covers, carrying cases and the like) suitable for use solely ...	0.84	0.50
Parts suitable for use solely or principally with transmission and reception apparatus for ...	0.33	0.43
Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking ...	0.33	0.79
Raw data source: ITC; Authors' computation		

With China's expanding areas of comparative advantage, the Philippines' import portfolio with China include a wide mix of light manufactures, intermediate inputs, parts and components, and agricultural products. Parts and components of electrical machinery and intermediate inputs (i.e., mineral fuels and articles of iron and steel) have significantly increased their shares in the Philippines' imports with China. The import share of electrical machinery has also sharply increased. The export portfolio of the Philippines with China, on the other hand, includes a mix of intermediate goods and agricultural products. Between 2016 and 2018, there is an increase in the export shares of agricultural products and intermediate goods in the exports of the Philippines to China, such as edible fruits, organic chemicals, and copper. At four-digit HS code, there is also a sharp increase in the export

share of electrical machines, printing machinery, and petroleum oils in the exports of the Philippines to China.



With the growing importance of China in the Philippines' vertical intra-industry trade, twelve export lines are added to the Philippines' export portfolio with China. The new export lines of the Philippines' export portfolio with China include intermediate inputs, such as oils, molybdenum ores, oilcake, machines and apparatus used for semiconductor, polyamides, synthetic rubber, salts of inorganic acid, motorcycle, waste and scrap of precious metals, and phosphides. The export portfolio of the



Philippines with China has also become more diversified as indicated by a decrease in HHI. Notwithstanding the increased diversification of the Philippines' export portfolio with China, it continues to incur a massive trade deficit with China. The huge trade imbalance of the Philippines with China is an outcome of their competitive import relations in which China preys upon the weak manufacturing base of the Philippines and their industry demand-driven export relations which help strengthen China's manufacturing capabilities across product categories.

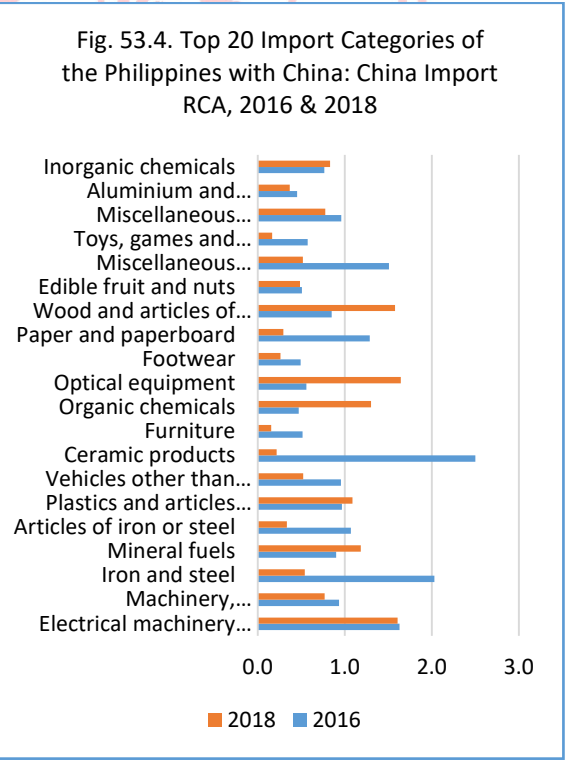
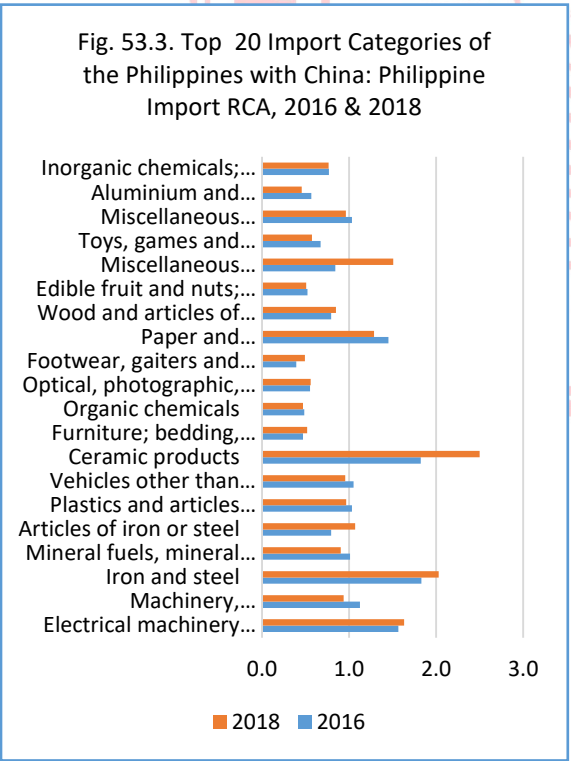
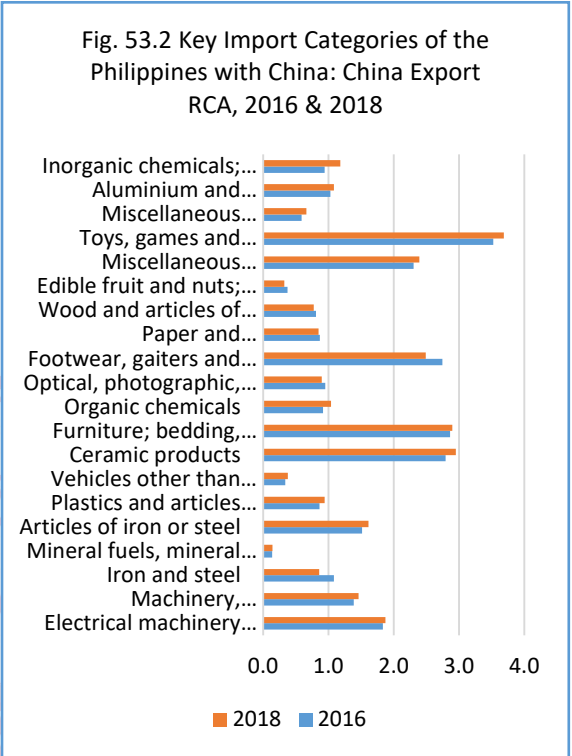
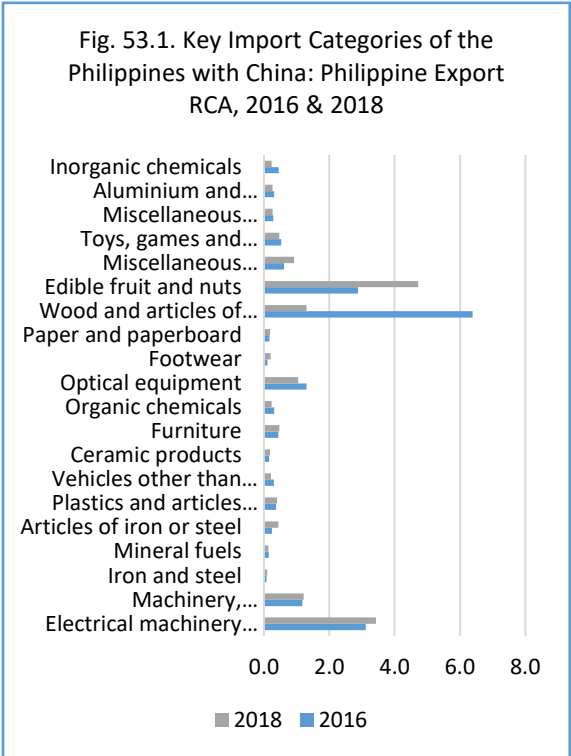
Commodity Aggregation Level	Number of Export Lines, 2016 & 2018		HHI Index	
	2016	2018	2016	2018
Two-digit HS Code	80	83	2245	2234
Four-digit HS Code	468	480	1194	726

Raw data source: ITC; Authors' computation

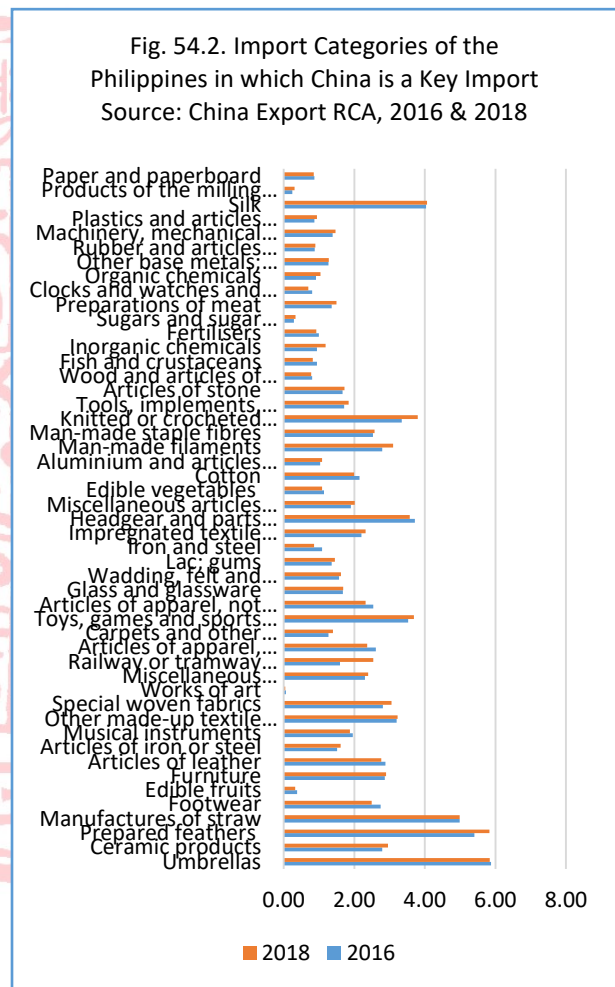
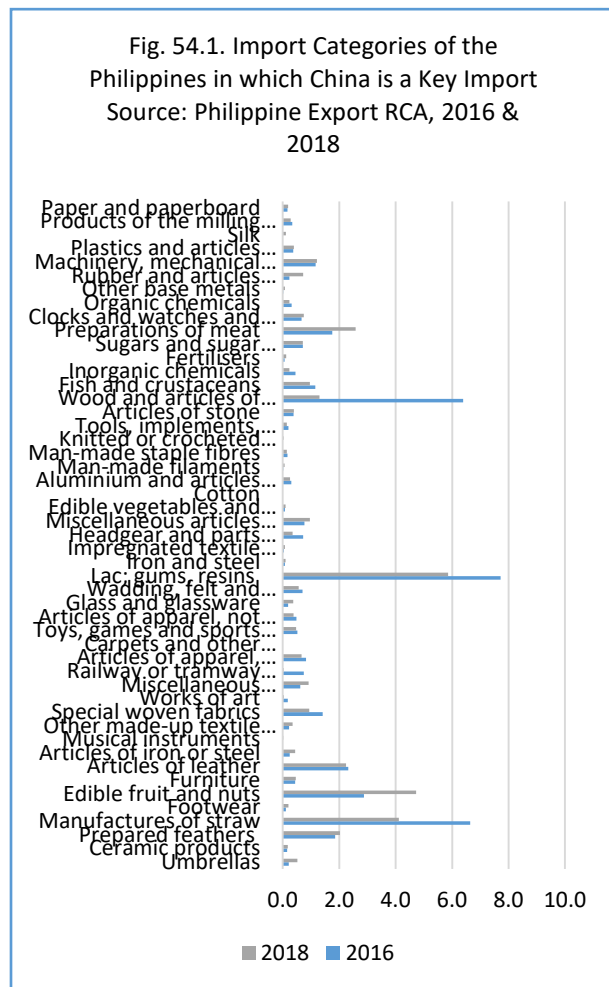
### 5.2.1. Philippines' Competitive Import Relations with China

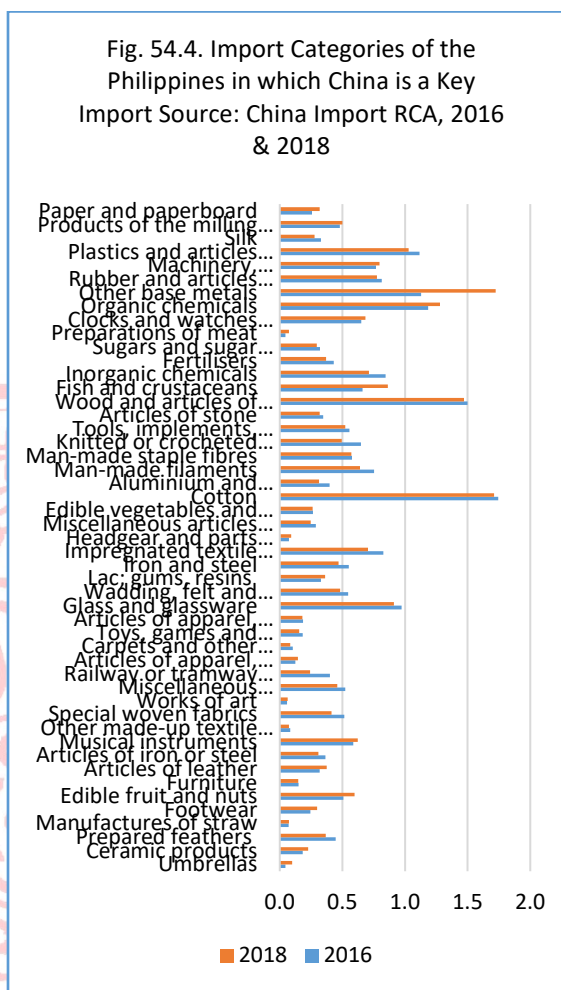
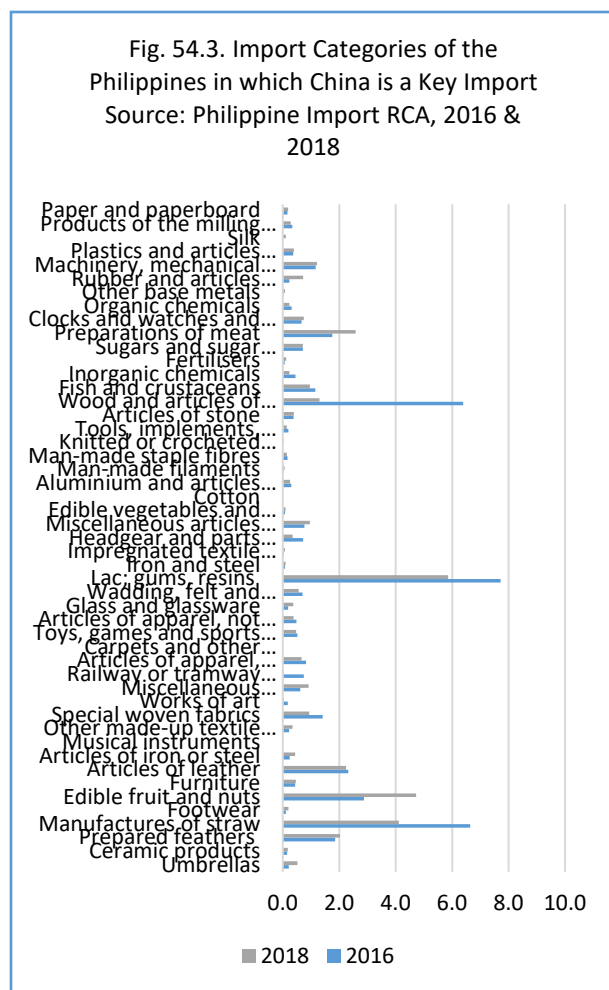
In 2010 the Philippines through ASEAN inked a free trade agreement with China to tap into the vast Chinese market and build an integrated regional production network. The ACFTA has succeeded in spurring Asian interconnectivity in manufacturing, particularly in electronics between China and the ASEAN member states.<sup>44</sup> But the Philippines has moderate participation in the Asian regional production network. Aside from being geographically more distant from China compared to other ASEAN member states, it does not have the labor cost advantage over Vietnam and the technological edge over Malaysia, Singapore and Thailand. Eight years since the full implementation of the ACFTA, the import relations of the Philippines with China has shown to be highly predatory and opportunistic. China's average export RCA is higher than the average export RCA of the Philippines and its average import RCA is lower than the average import RCA of the Philippines in this product group. But the average export RCA of the Philippines is close to unity suggesting significant local product production of import-competing goods. Of the top 20 import categories of the Philippines with China, China has comparative advantage in 11 categories (i.e., electrical machinery, machinery and mechanical appliances, articles of iron and steel, ceramic products, furniture, organic and inorganic chemicals, miscellaneous manufactured articles, toys, aluminums, and footwear), while the Philippines displays comparative advantage in five categories (i.e., electrical machinery, machinery and mechanical appliances, optical equipment, wood, and edible fruits). Reflecting its narrow manufacturing base, the Philippines exhibits strong import specialization patterns in 10 product categories (e.g., articles of iron and steel, electrical machinery, plastics, vehicles, ceramic products, and paper and paper products) making it highly receptive to the influx of low-priced Chinese goods. Although China has yet to have a comparative advantage in mineral fuels, plastics, optical equipment, and wood, it is gaining comparative advantage in these products. With the Philippines' weak manufacturing base, the country, as an FTA partner, serves as an easy export market for China's yet to be globally competitive exportables.

<sup>44</sup> M. Fuad, M. Fua Salleh, A. Norlaila and N. Abdullah Chik, (May 2013), ASEAN-China Free Trade Area: An Opportunity to Move Forward, Conference: International Seminar on Economics Opportunity for Indonesia and Malaysia, Malaysia.



The predatory import relations of the Philippines with China stands apparent in product categories in which China is a dominant import supplier of the Philippines. Most of these product categories are light manufactures and agricultural products (e.g., umbrellas, ceramic products, prepared feathers, manufactures of straw, footwear, edible fruits, edible vegetables, furniture, articles of leather, articles of iron, steel and articles of apparel, special woven fabrics and miscellaneous manufactured articles). China's average export RCA is substantially higher than the average export RCA of the Philippines and its average import RCA is much lower than the average import RCA of the Philippines. But the average import RCA of the Philippines in this product group is lower than in its key import categories with China indicating that China's competitive threat is greater and more predatory in this product group.





The Philippines' predatory import relations with China has resulted in an increasingly huge trade deficit with China, especially in agricultural goods and light manufactures (e.g., footwear, furniture, miscellaneous manufactured articles, ceramic products, umbrellas, wadding, musical instruments, other made-up textile fiber, works of art, articles of apparel, carpets, toys, glass and glassware, and edible vegetables, among others). China supplies the bulk of the Philippines' imports of these sensitive goods, a majority of which are imported by the Philippines in their final form rather than as raw materials or semi-finished goods making them key contributors to the Philippines' trade deficit with the world. The Philippines also incurs a large trade deficit with China in product categories that are of strategic interest to China, such as vehicles, arms and ammunitions, mineral fuels, and aircraft. While the Philippines may be a relatively small market, it is an important export market for China in aircraft and arms and ammunitions. Although the shares of arms and ammunitions and aircraft to the Philippines' imports from China have remained insignificant, it has sharply increased between 2016 and 2018. The Philippines' aircraft imports from China have posted a triple-digit growth rate making China its 7<sup>th</sup> largest source of parts and components of aircraft. The so-called "new era" of ties between the military forces of the Philippines and China has expanded the Philippines' trade with



China in aircraft, arms and ammunitions and other strategic goods.<sup>45</sup> The enormous trade deficit of the Philippines with China is likely to persist as growth prospects of the Philippines' imports from China improve amid China's comparative advantage gains and the Philippines' deeper import specialization patterns in most of its key import categories with China. China's average export RCA and import RCA has steadied, but the average export RCA of the Philippines has significantly decreased and its average import RCA has markedly increased in the key import categories of the Philippines with China. Specifically, the import RCA of the Philippines has increased in ceramic products, footwear, miscellaneous manufactured articles, articles of iron and steel, iron and steel, while its export RCA has decreased in wood and articles of wood, optical equipment, toys, and vehicles. The same changes in RCA patterns are observed in product categories in which China is a dominant import supplier of the Philippines.

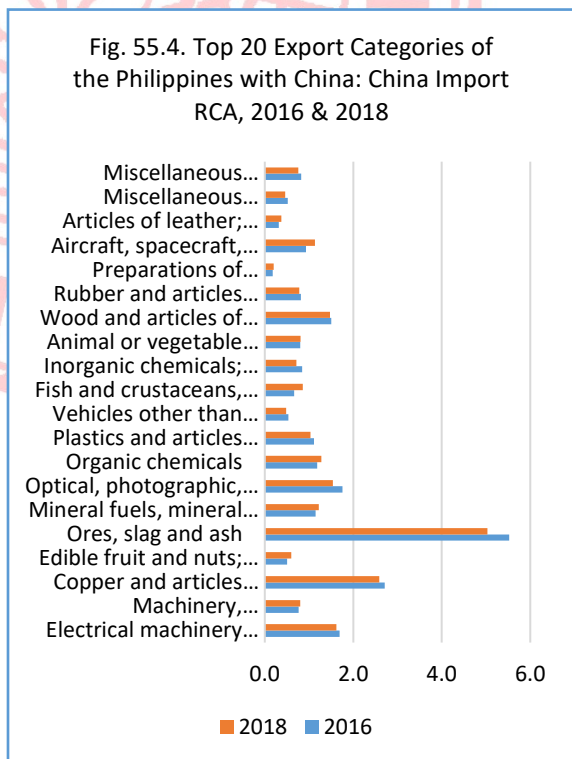
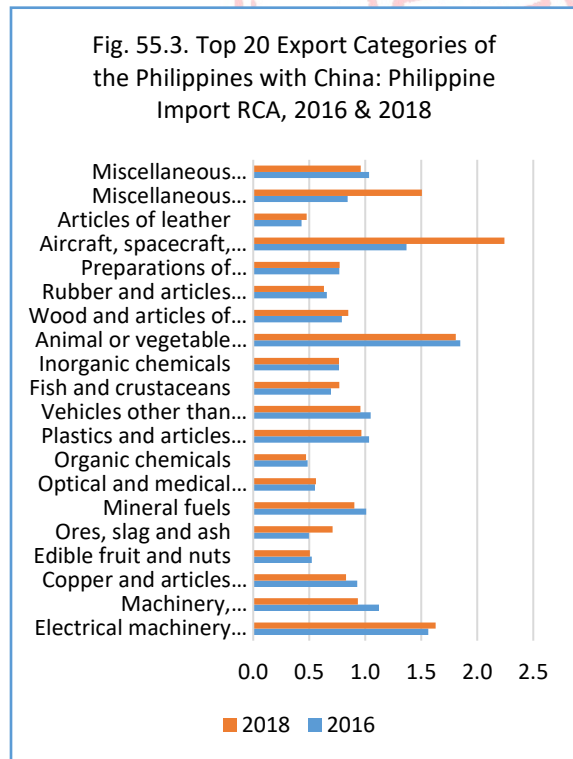
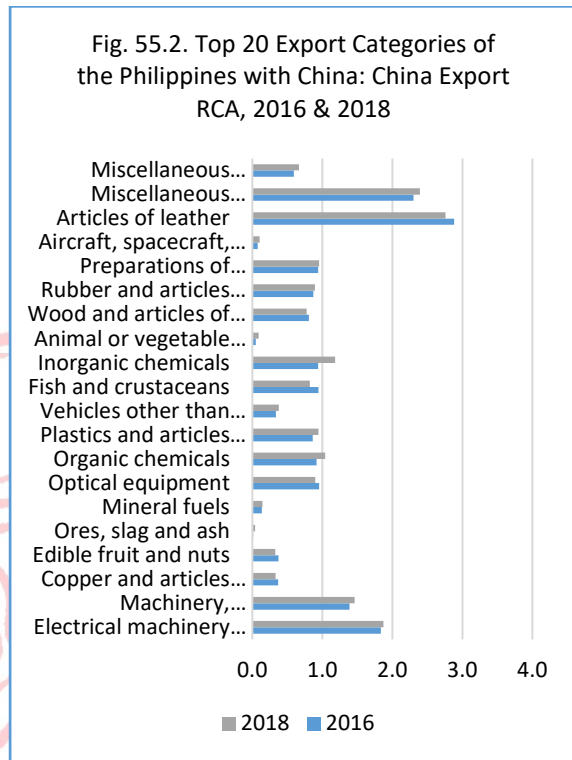
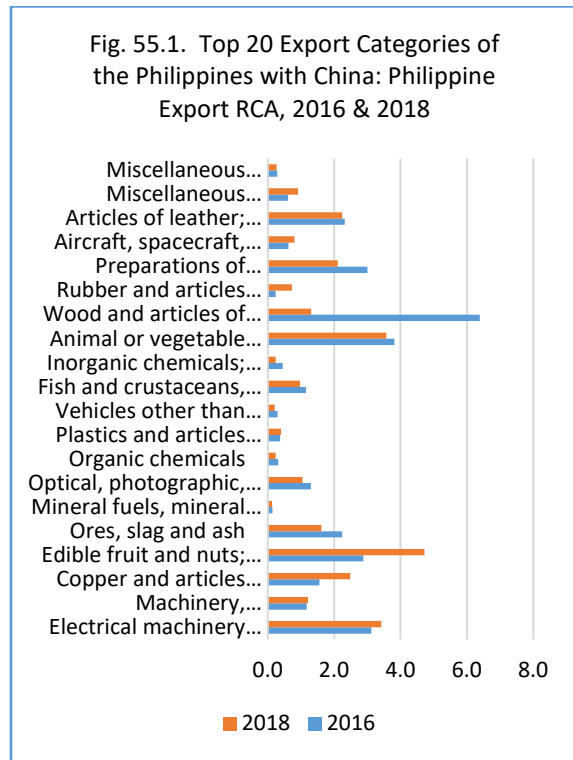
Product Categories	2016	2018
Footwear	-157.6	-285.3
Furniture	-302.6	-445
Miscellaneous Manufactured articles	-62	-216.4
Ceramic products	-333.4	-593.2
Umbrellas	-13	-22.9
Wadding	-29.3	-73.3
Articles of Apparel, not knitted	-81.2	-132.6
Toys, games and sports requisites	-125.5	-205.4
Glass and glassware	-160.1	-179.6
Edible vegetables	-46.2	-57.1
Machinery and mechanical appliances	-108397	-872137
Dairy Produce	-1006	-5181
Soap, organic, surface-active agents	-32364	-73124
Oilseeds	-4188	-25408
Preparation of meat	-10245	-18569
Mineral fuels	-896914	-1825433
Miscellaneous chemical products	-94788	-178322
Vehicles other than railway	-386630	-682331
Aircraft	-15.2	-104.1
Arms and ammunitions	-0.5	-3.9
Raw data source: ITC; Authors' computation		

### 5.2.2. Dynamics of the Philippines Complementary Export Relations with China

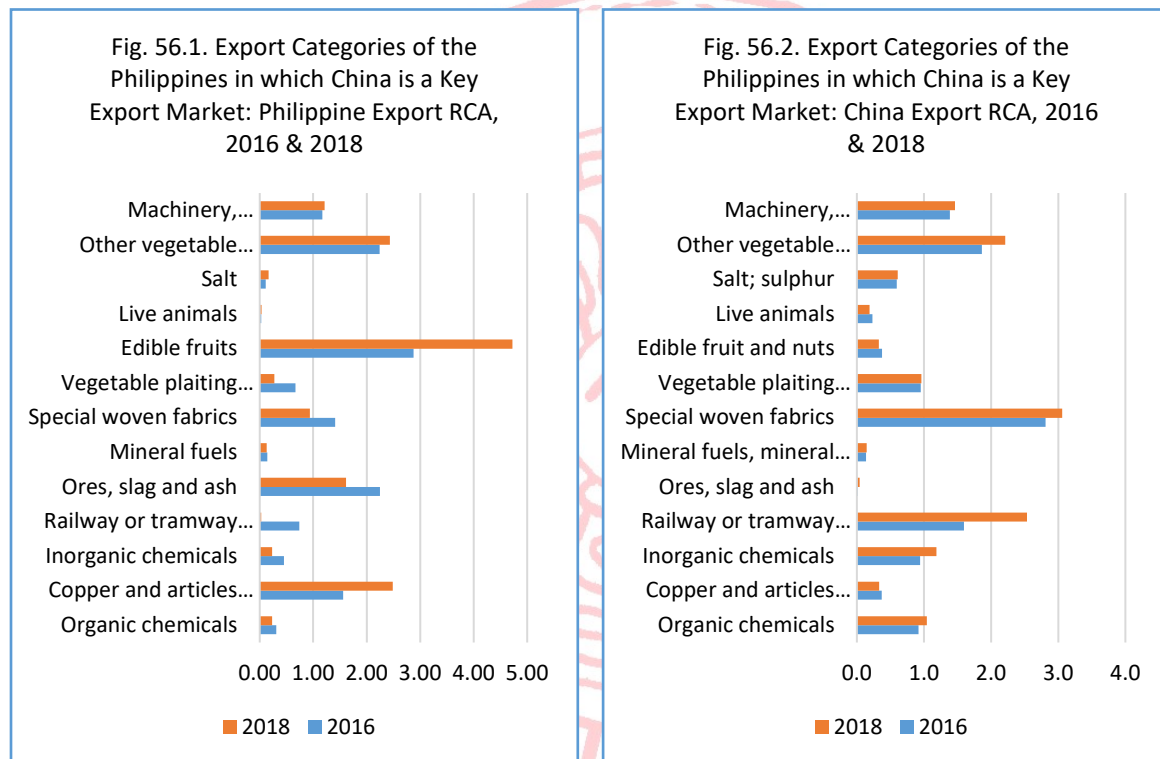
The Philippines maintains a roughly complementary export relations with China. The Philippines has a comparative advantage in majority of its top export categories with China and China has a comparative disadvantage and strong import specialization patterns in most of these product categories. The Philippines' average export RCA is above unity and significantly higher than China's

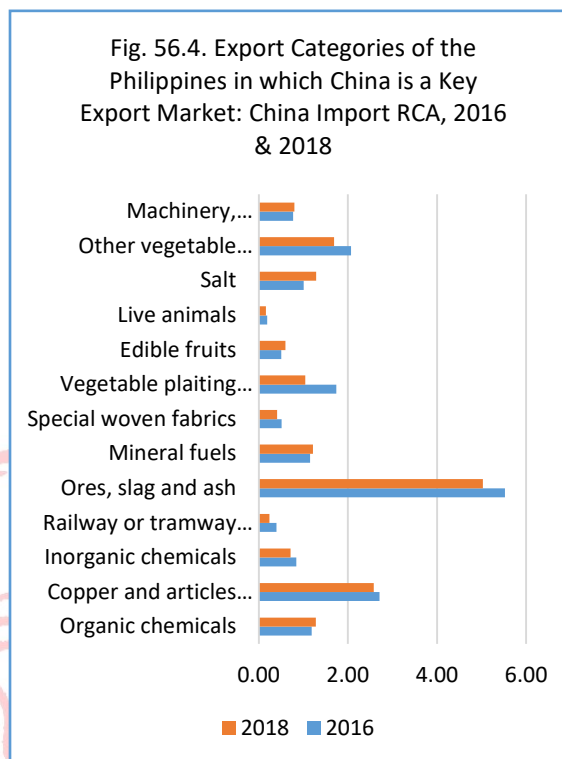
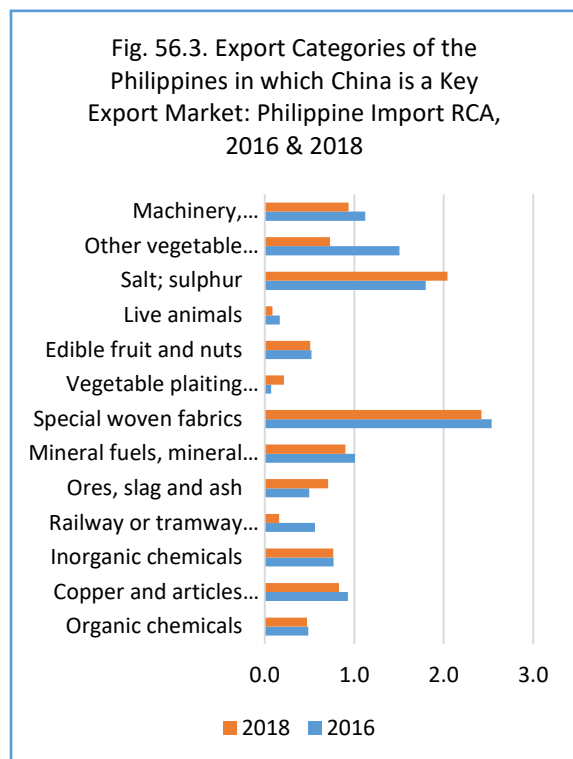
<sup>45</sup> P. Ranada, (2017, June 28), China gives P370 million in Guns, ammunitions to Ph, *Rappler*,  
<https://www.rappler.com/nation/174190-china-military-aid-guns-ammunition-philippines-marawi-terrorism>

average export RCA and its average import RCA is lower than China's. These include a mix of intermediate goods, agricultural products and parts and components.



The complementary export relations of the Philippines with China weakly hold in product categories in which China serves as its dominant export market (e.g., organic chemicals, copper, inorganic chemicals, railway, ores and slag, mineral fuels, special woven fabrics, vegetable plaiting materials). The average export RCA of the Philippines is slightly higher than the average export RCA of China, and China's average import RCA is significantly higher than the average import RCA of the Philippines in this product group. But the Philippines does not have a comparative advantage, while China displays strong import specialization patterns in some of these product categories, such as salt, sulphur and pebbles, organic chemicals, mineral fuels, and vegetable plaiting materials. The Philippines appears to cater to the sizeable demand of China for these intermediate goods. China's export share in the Philippines' exports of copper, inorganic chemicals, and organic chemicals rose by at least 22 percentage points.





The growth prospects of the exports of the Philippines with China are strong in key export categories of the Philippines with China on account of their increased trade complementarities. In this product group, the average export RCA of the Philippines has significantly increased (e.g., electrical machinery, machinery and mechanical appliances, copper, edible fruits, plastics, and rubber), while China continues to have a comparative disadvantage in most of these product categories, albeit there is a minuscule increase in its average export RCA and a slight decline in its average import RCA. But the growth prospects of the exports of the Philippines with China is less sanguine in product categories in which China serves as its dominant export market. The average export RCA of China has recorded a larger increase than the Philippines' average export RCA, and China's average import RCA has posted a larger decline than the Philippines' average import RCA in this product group. The comparative advantage gains of China and the concomitant shift in its import specialization away from these product categories are set to limit the export growth prospects in this product group.

### 5.2.3. Reining in the Philippines' Asymmetric Interdependence with China

The wide disparity in market size and manufacturing capabilities between China and the Philippines have obscured the differences between South-South trade and North-South trade and magnifies the downsides of South-South trade. The Philippines' predatory import relations and industry demand-driven export relations with China have spawned a vicious cycle of asymmetric interdependence in which the Philippines' growing import dependency on China across product categories, including those in which China does not have a comparative advantage, serves to further expand China's area of comparative advantage facilitating further dominance in the country's trade. The Philippines then finds itself increasingly defined by its trade with China, importing and exporting products that complement China's industry demand patterns. Most of the high-performing exports of the



Philippines to China are agricultural products and less complex parts and components (e.g., cereals, coffee, cork, explosives, nickel, fertilizers, meat and edible meat offal, musical instruments, pharmaceutical products, residues and waste, tools and implements, clocks and watches, and live trees). The Philippines does not have comparative advantage and China does not exhibit strong import specialization patterns in most of these export categories thus limiting the prospects of sustained export expansion. This contrasts with the strong growth prospects of the Philippines' imports with China. The Philippines displays strong import specialization patterns and China is gradually gaining comparative advantage in its high-performing import categories with China. These include a wide mix of product categories, such as mineral fuels, works of art, oilseeds, nickel, pulp of wood, and live trees, arms and ammunition, lead, aircraft, dairy products, residues and waste, products of the milling industry, and tin.

To limit the Philippines' asymmetric interdependence with China, it is imperative for the Philippines to strengthen its export promotion strategies beyond raw materials and intermediate inputs. Given China's ravenous appetite for raw materials and intermediate inputs, the Philippines' exportation of these commodities to China does not only serve to strengthen China's manufacturing capabilities, it also further weakens the linkage of the country's export sector with the rest of the economy. As it stands, the Philippines' exports of high-technology goods continues to expand sans a significant increase in their value-added due to their limited backward and forward linkages. In this regard, there is a need to revisit the Philippines' investment deals with China under Belt and Road Initiative (BRI) designed facilitate a large-scale resource extraction and exportation of resource-based products to China through infrastructure and agricultural development. Under the Beijing's BRI, China has pledged USD15 billion worth of investment projects in sectors, such as telecommunication, rail transport, seaports, airports, renewable energy, steel plants, rice production, and banana plantation, among others. China's investment pledges to the Philippines bear the full footprint of Beijing's Belt and Road Initiative (BRI) in which energy extraction topped Chinese investments followed by mining (i.e., bauxite, copper and iron) and agriculture as well as transport and property construction all aimed at ensuring a stable supply of intermediate inputs for the world's global factory.<sup>46</sup>

### 5.3. Philippines-U.S. Bilateral Trade

The North-South trade between the Philippines and the U.S. is characterized by highly complementary export and import relations. The USD20.5-trillion U.S. market with a per capita income of over USD54 thousand has long served as a top export market of the Philippines. The Philippines' export portfolio with the U.S. include a broad mix of parts and components of electrical machinery, machinery and mechanical appliances, and optical equipment, aircraft, and vehicles, intermediate goods (i.e., rubber, plastics, articles of iron and steel, and miscellaneous articles of base metal), light manufactures (i.e., furniture, articles, articles of leather, toys and games, clocks and watches), and agricultural products (i.e., animal vegetable fats or oil, edible fruits, preparations of

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<sup>46</sup> U.S. Senate Committee on Small Business and Entrepreneurship, (2019), "Made in China 2025 and the Future of the American Industry, [https://www.rubio.senate.gov/public/\\_cache/files/d1c6db46-1a68-481a-b96e-356c8100f1b7/3EDECA923DB439A8E884C6229A4C6003.02.12.19-final-sbc-project-mic2025-report.pdf](https://www.rubio.senate.gov/public/_cache/files/d1c6db46-1a68-481a-b96e-356c8100f1b7/3EDECA923DB439A8E884C6229A4C6003.02.12.19-final-sbc-project-mic2025-report.pdf)

meat, preparations of vegetables and fruit, fish and crustaceans). The U.S. has also been the Philippines' important supplier of medium-and high-technology intermediate and final goods, and high-value agricultural commodities. These include cereals, residues and wastes, powered aircraft, dairy produce, miscellaneous chemical products, and pharmaceutical products. The U.S. has been a more important export market than an import source of the Philippines. Such bilateral trade dynamics appears to intensify in electrical machinery with the export share of electrical machinery in the Philippines' exports with the U.S. expanding, while its import share in the Philippines' imports with the U.S. has declined. The GL index of the Philippines' trade with the U.S. has also slightly decreased. The vertical intra-industry trade has become slightly less important in the Philippines' trade with the U.S. Still, the vertical intra-industry trade between the Philippines and the U.S. has remained high in parts of aircraft, electronic integrated circuits and machinery, plant or laboratory equipment.



Fig. 57.1. Top 20 Export Categories of the Philippines with the U.S. by Export Share at 2-digit HS Code, 2016 & 2018

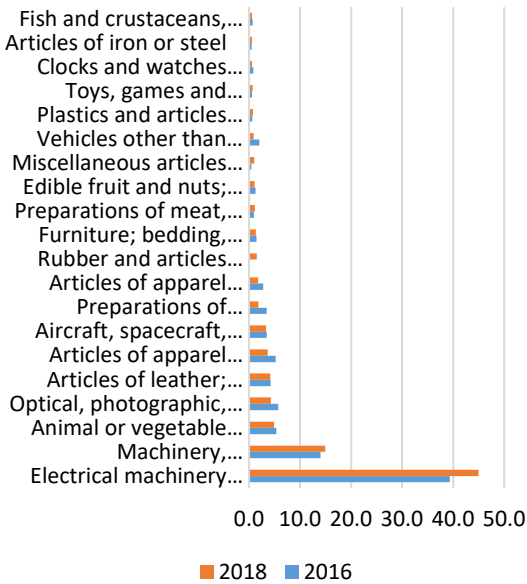


Fig. 57.2. Top 20 Import Categories of the Philippines with the U.S. by Export Share at 2-digit HS Code, 2016 & 2018

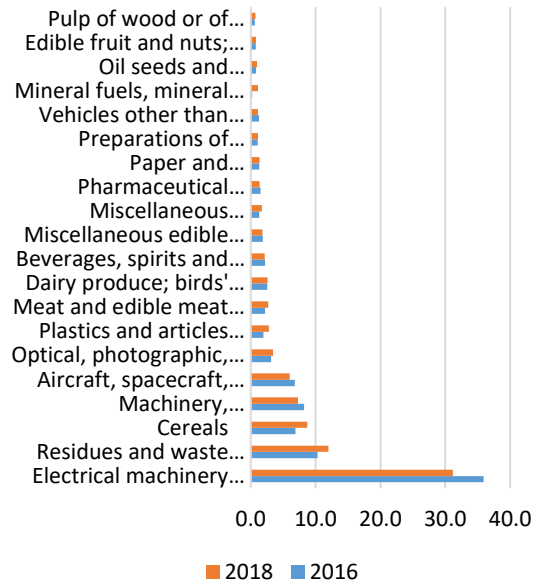


Fig. 57.3. Top 20 Export Categories of the Philippines with the U.S. by Export Share at 4-digit HS Code, 2016, 2018

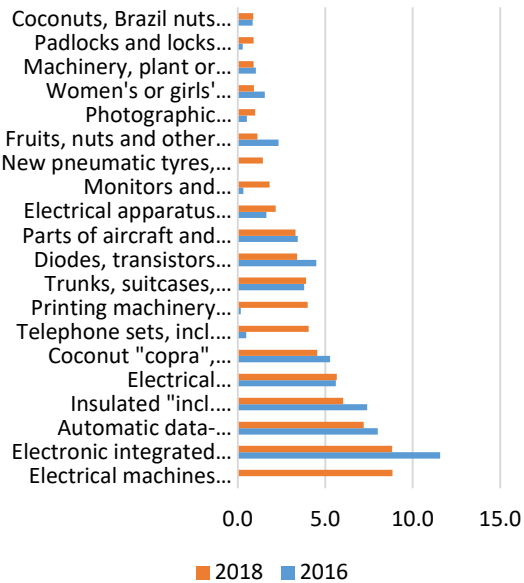
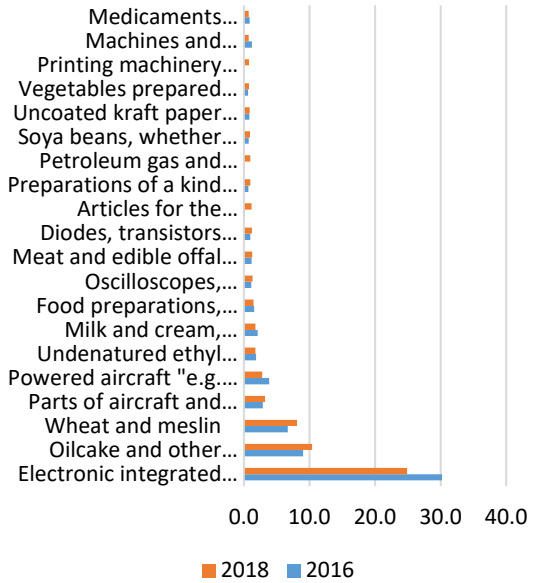


Fig. 57.4. Top 20 Import Categories of the Philippines with the U.S. by Export Share at 4-digit HS Code, 2016 & 2018



Product Categories	2016	2018
Trade-weighted Grubel-Lloyd Indices	0.25	0.22
Electrical machines and apparatus, having individual functions, n.e.s. in chapter 85 and parts ...	0.13	0.10
Electronic integrated circuits; parts thereof	0.60	0.62
Automatic data-processing machines and units thereof; magnetic or optical readers, machines ...	0.10	0.09
Insulated "incl. enamelled or anodised" wire, cable "incl. coaxial cable" and other insulated ...	0.08	0.09
Electrical transformers, static converters, e.g. rectifiers, and inductors; parts thereof	0.13	0.10
Coconut "copra", palm kernel or babassu oil and fractions thereof, whether or not refined, ...	0.00	0.00
Telephone sets, incl. telephones for cellular networks or for other wireless networks; other ...	0.93	0.25
Printing machinery used for printing by means of plates, cylinders and other printing components ...	0.32	0.27
Trunks, suitcases, vanity cases, executive-cases, briefcases, school satchels, spectacle cases, ...	0.01	0.01
Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, ...	0.33	0.45
Parts of aircraft and spacecraft of heading 8801 or 8802, n.e.s.	0.85	0.87
Electrical apparatus for switching or protecting electrical circuits, or for making connections ...	0.63	0.41
Monitors and projectors, not incorporating television reception apparatus; reception apparatus ...	0.12	0.05
New pneumatic tyres, of rubber	0.01	0.05
Fruits, nuts and other edible parts of plants, prepared or preserved, whether or not containing ...	0.07	0.11
Photographic cameras, photographic flashlight apparatus and flashbulbs (excluding discharge ...	0.06	0.02
Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, ...	0.00	0.01
Machinery, plant or laboratory equipment whether or not electrically heated (excluding furnaces, ...	0.54	0.59
Padlocks and locks "key, combination or electrically operated", of base metal; clasps and frames ...	0.22	0.03
Coconuts, Brazil nuts and cashew nuts, fresh or dried, whether or not shelled or peeled	0.00	0.00
Raw data source: ITC; Authors' computation		

As export relations of the Philippines with the U.S. intensifies, 54 export lines have been added to the Philippines' export portfolio with the U.S. These are mostly parts and components of electrical machinery, vehicles and machinery and mechanical appliances and a few intermediate goods and agricultural products (e.g., bodies, incl. cabs, for tractors, motor vehicles for the transport of ten or more persons, prepared or preserved meat, offal or blood (excluding sausages and similar products, and meat, stranded wire, cables, plaited bands and the like, of copper, rubberized textile fabrics,



cotton, neither carded nor combed, fabricated asbestos fibers, electric, incl. electrically heated gas, laser or other light or photon beam, military weapons, incl. sub-machine guns, citrus fruit, fresh or dried, preserved tomatoes, machines and apparatus of a kind used for manufacture of semiconductor, waste, parings and scrap of plastics). With a significant increase in the export share of electrical machinery in the Philippines' exports with the U.S., its export portfolio with the U.S. has become slightly less diversified based on the HHI at two-digit HS code. But there appears to be improved diversification within existing export categories as indicated by a decrease in the HHI at four-digit HS classification.

Level of Disaggregation	Number of Export Lines, 2016 & 2018		HHI	
	2016	2018	2016	2018
Two-digit HS Code	81	83	1893	2347
Four-digit HS Code	561	615	2245	2234
Raw data source: ITC; Author's computation				

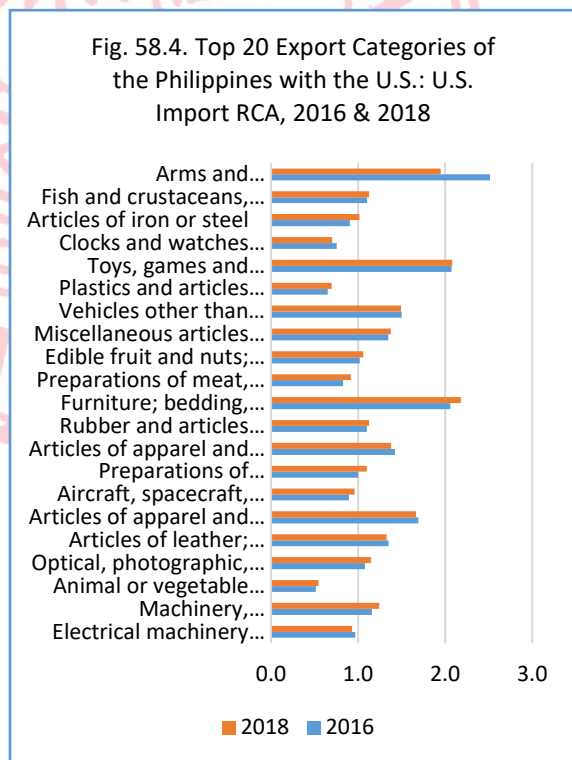
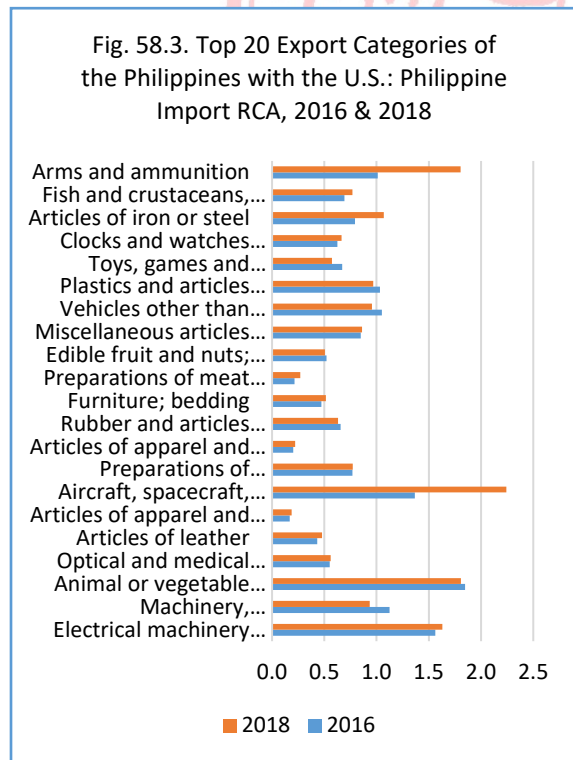
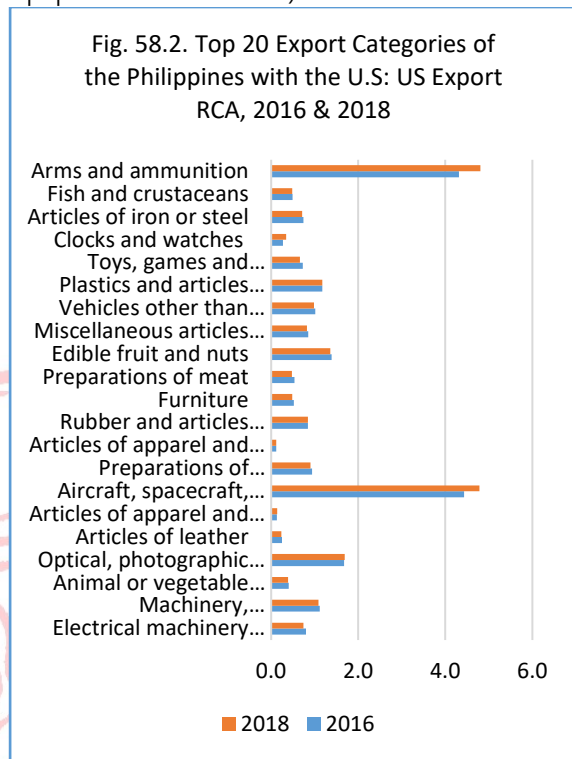
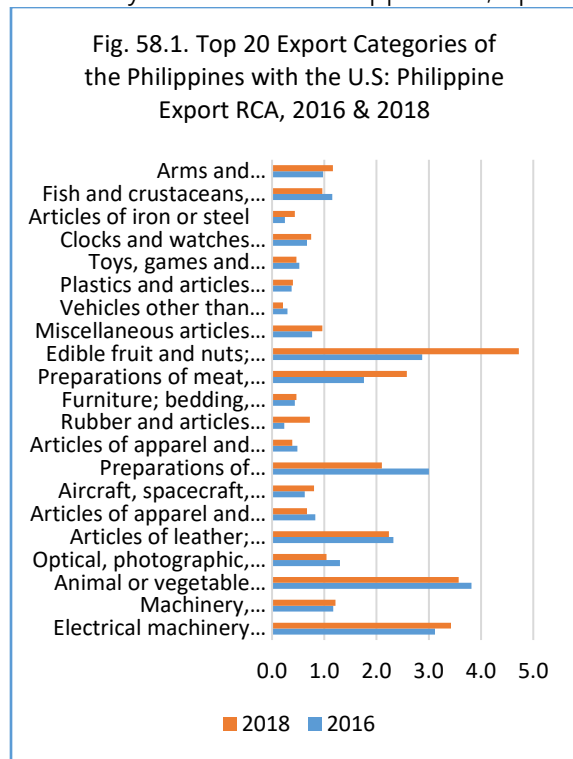
### 5.3.1. Dynamics of the Philippines' Complementary Export Relations with the U.S.

The dynamics of the Philippines' export relations with the U.S. reflects their strong trade complementarity, the U.S. GSP and the size of U.S. market. The U.S. GSP grants preferential tariff treatment to selected developing country exports to help the latter expand and diversify its export portfolio. The U.S. GSP can be partly credited for the improvement in the Philippines' manufacturing capabilities. Aside from gaining preferential access to the large U.S. market, the U.S. GSP makes the Philippine manufacturing more attractive to foreign investors. By investing in the Philippines, investment partners get to export to the U.S. market at reduced tariff rates through the U.S. GSP scheme. Top GSP exports of the Philippines to the US include a broad mix of product categories, such as, telescopic sights for rifles, spectacle lenses other than glass, new pneumatic radial tires of rubber, non-alcoholic beverages, not including fruits and vegetables, and electrical machinery and equipment parts.<sup>47</sup> The U.S. GSP exports account for 18 percent of Philippines' exports to the U.S. yielding a diversified export portfolio of the Philippines with the U.S.

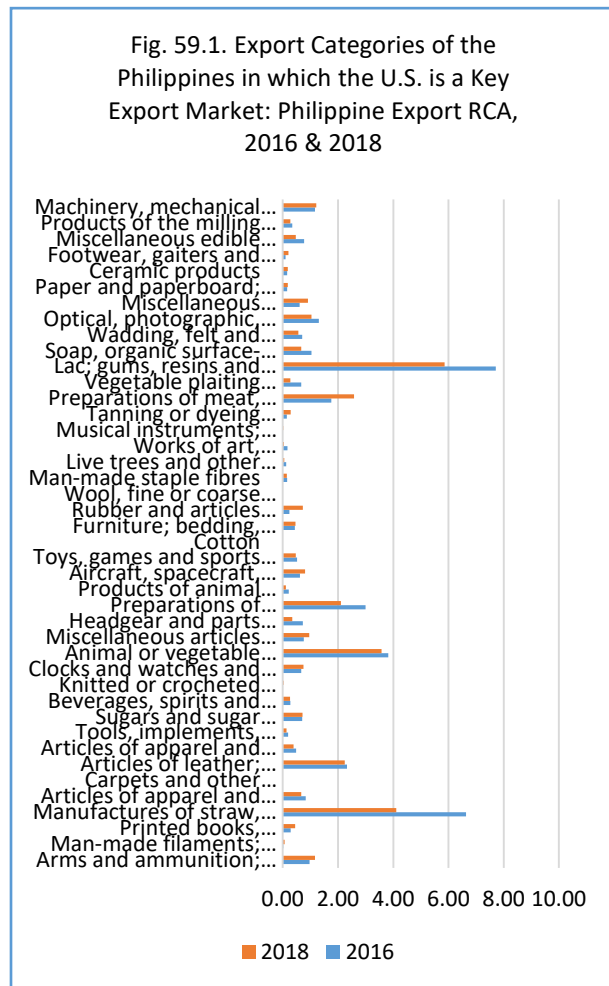
Apart from the U.S. GSP, the intense export relations of the Philippines with the U.S. is also buttressed by their strong trade complementarity. Of the top 20 export categories of the Philippines to the U.S., the Philippines has a comparative advantage in 10 product categories (i.e., electrical machinery, machinery and mechanical appliances, animal or vegetable fats and oils, optical equipment and articles of leather, and preparation of vegetables and fruits) and the U.S. has a high import RCA in 14 export categories (i.e., machinery and mechanical appliances, optical equipment, articles of leather, articles of apparel, knitted and not knitted, and preparations of vegetable). Reflecting vertical intra-industry trade linkages, the U.S. has a comparative advantage and the Philippines has a high export

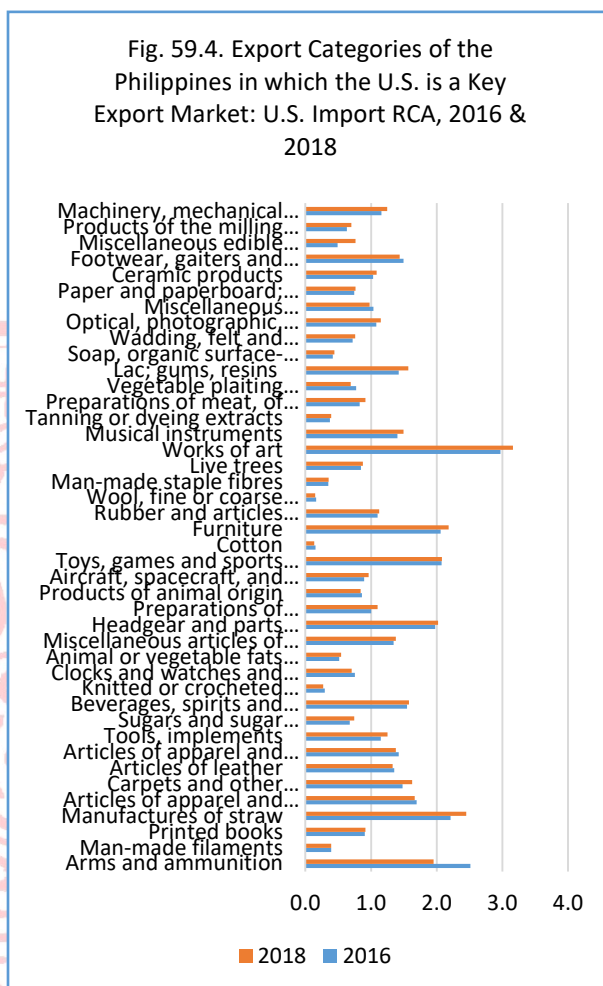
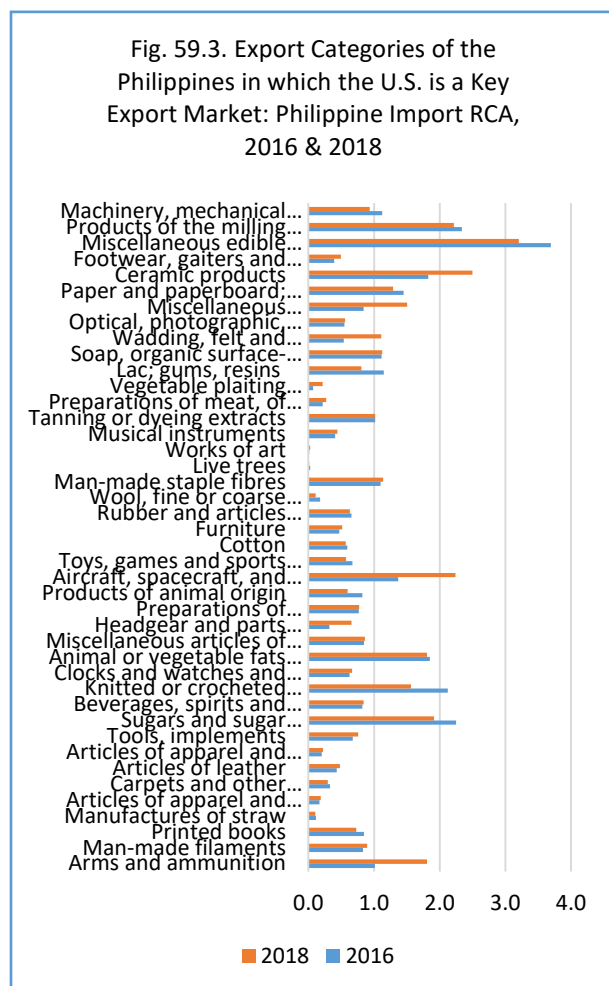
<sup>47</sup> "US Generalized System of Preferences for Philippines extended for three years (2018, March 26)," *Philippine Star*, <https://www.philstar.com/business/2018/03/26/1800265/us-generalized-system-preferences-philippines-extended-3-years>

RCA and a high import RCA in three key export categories of the Philippines with the U.S., (i.e., machinery and mechanical appliances, optical equipment and aircraft).



There is , however, a slightly different dynamics in product categories in which the U.S. serves as its dominant export market (e.g., arms and ammunitions, man-made filaments, printed books, manufactures of straw, articles of apparel, carpets, articles of leather, articles of apparel, tools, sugar, and beverages). The Philippines does not have a comparative advantage in most of these product categories, but import demand of the U.S. appears to be strong making the U.S. a special export market for the Philippines, especially for light manufactures. In this product group, both the average export RCA and average import RCA of the U.S. are higher than the average export RCA and average import RCA of the Philippines, but the net export RCA of the Philippines is higher than the U.S. making its export relations with the U.S. complementary in this product group.





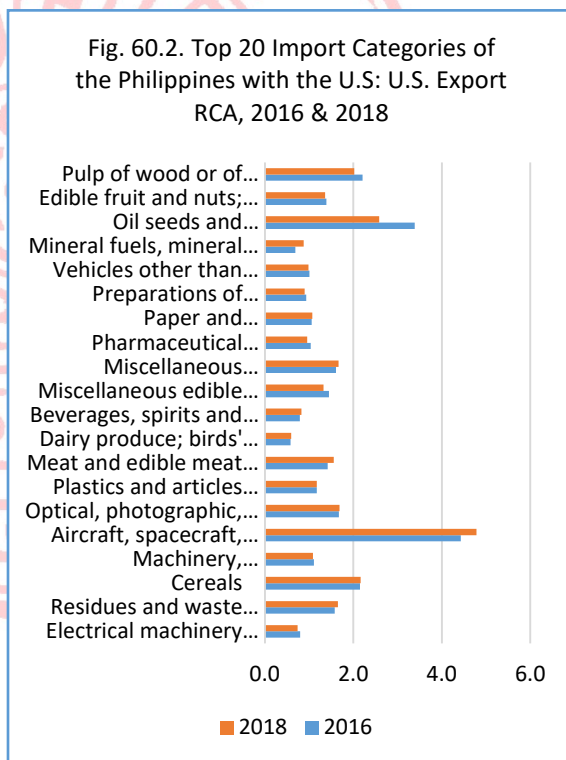
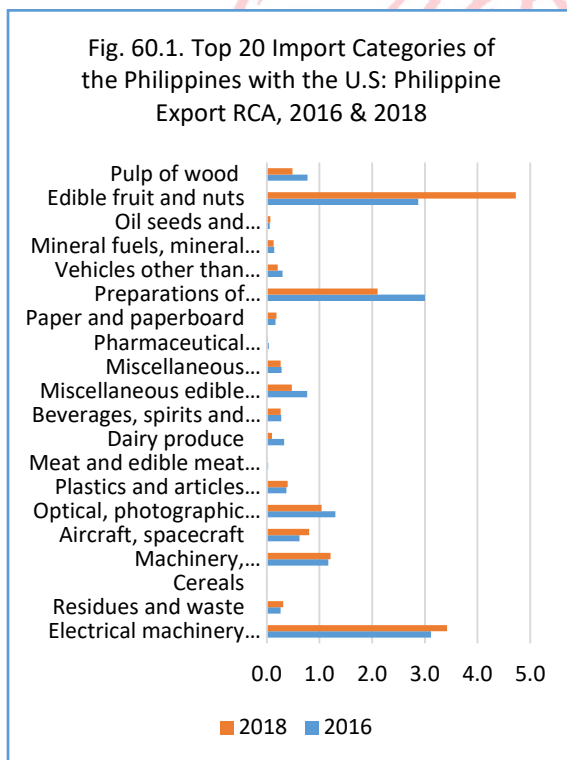
The strong export relations of the Philippines are set to continue as trade complementarity of the Philippines and the U.S. has improved, particularly in its key export categories with the U.S. Between 2016 and 2018, the Philippines' average export RCA has increased, while the U.S. average import RCA has slightly improved in key export categories of the Philippines with the U.S., albeit there are wide variations across product categories. Of the 20 key export categories of the Philippines to the U.S., the Philippines' export RCA has declined in nine product categories (e.g., vehicles, toys, fish and crustaceans, animal or vegetable fats and oil, optical and medical instruments, articles of leather, articles of apparel, knitted and not knitted, and preparations of vegetable), while the U.S import RCA has declined in six product categories (i.e., electrical machinery, articles of apparel, vehicles, clocks, articles of leather and vehicles). The prospects of export expansion is less sanguine for product categories in which the U.S. serves as its dominant export market. Although the average import RCA of the U.S. has increased, the Philippines' average export RCA has increased and its average import RCA has decreased indicating a slight shift in the latter's export specialization away from these product categories. These are mostly light manufactures (e.g., manufactures of straw, articles of

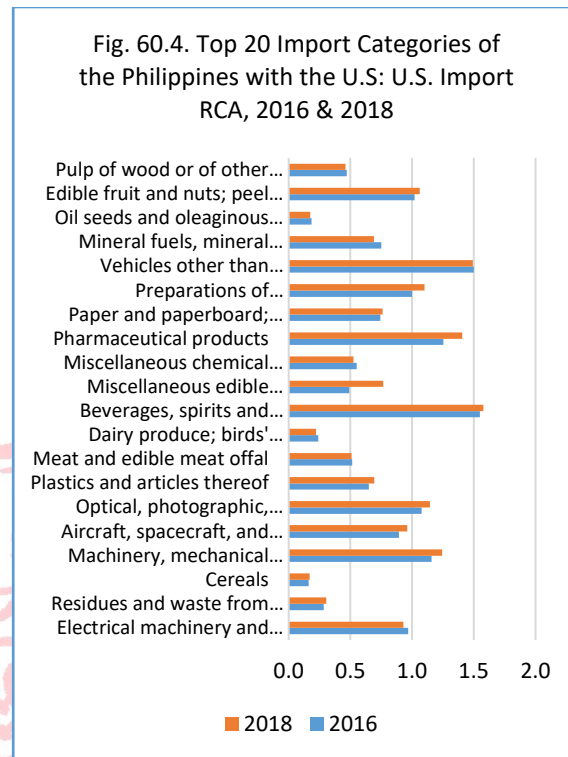
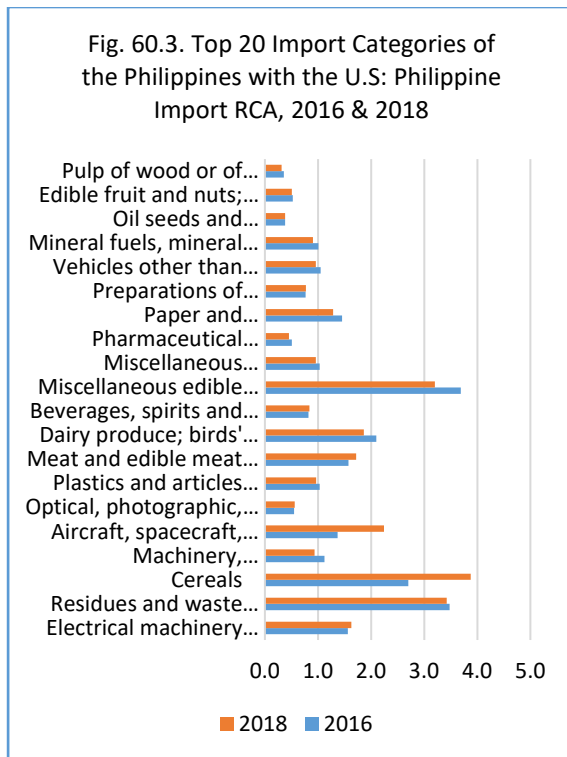


apparel and clothing, articles of leather, and headgear) in which China has a strong comparative advantage. With the U.S. GSP scheme and the gradual economic decoupling of Northern countries from China, however, the export growth prospects of the Philippines with the U.S. is likely to remain strong.

### 5.3.2. Philippines' Complementary Import Relations with the U.S.

The Philippines also maintains a complementary import relations with the U.S. The U.S. has a comparative advantage in most of the Philippines' key import categories with the U.S. These include a mix of medium-and high technology goods and agricultural products. The Philippines has a high average import RCA and a low average export RCA and the U.S. has a high average export RCA and a low average import RCA in this product group. Of the top 20 import categories of the Philippines with the U.S., the U.S. has a comparative advantage in 15 import categories and the Philippines displays strong import specialization in 11 import categories. The complementary import relations of the Philippines with the U.S. is evident in residues and waste, cereals, beverages, meat and edible meat offal and aircraft.





The complementary import relations of the Philippines with the U.S. also holds in import categories in which the U.S. is its dominant import supplier, albeit to a lesser extent. The Philippines has a comparative disadvantage and the U.S. has a comparative advantage in some of these product categories (e.g., products of animal origin, pulp of wood, meat and edible meat offal, photographic equipment, aircraft, and cotton). The average export RCA of the U.S. is higher than the average export RCA of Philippines and the average U.S. import RCA is lower than the average import RCA of the Philippines in this product group.

Fig. 61.1. Import Categories of the Philippines in which the U.S. is a Key Import Source: Philippine Export RCA, 2016 & 2018

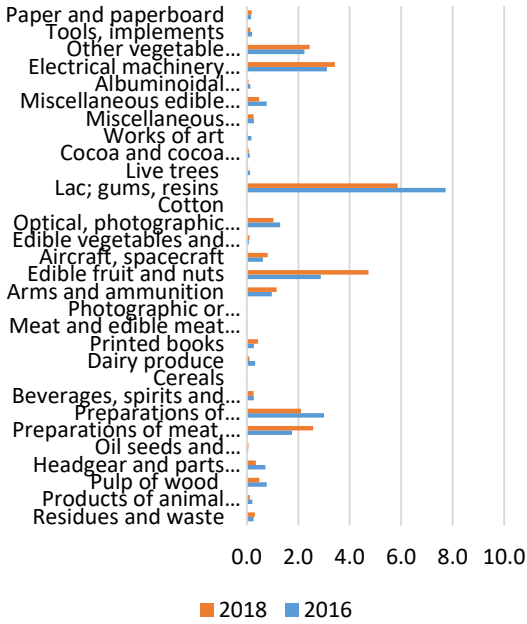


Fig. 61.2. Import Categories of the Philippines in which the U.S. is a Key Import Source: U.S. Export RCA, 2016 & 2018

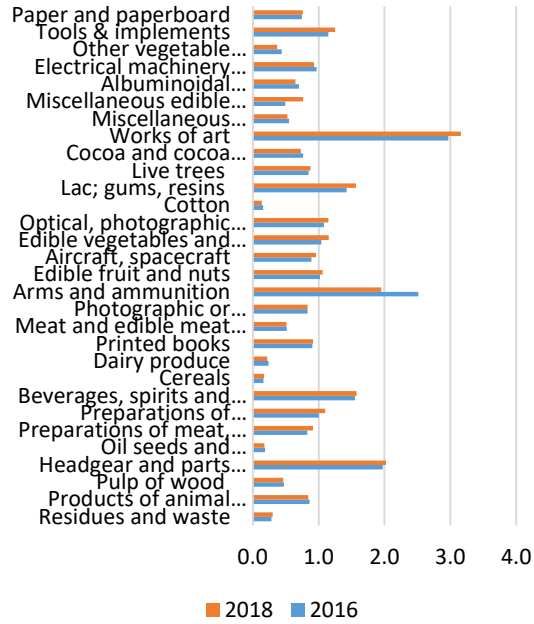


Fig. 61.3. Import Categories of the Philippines in which the U.S. is a Key Import Source: Philippine Import RCA, 2016 & 2018

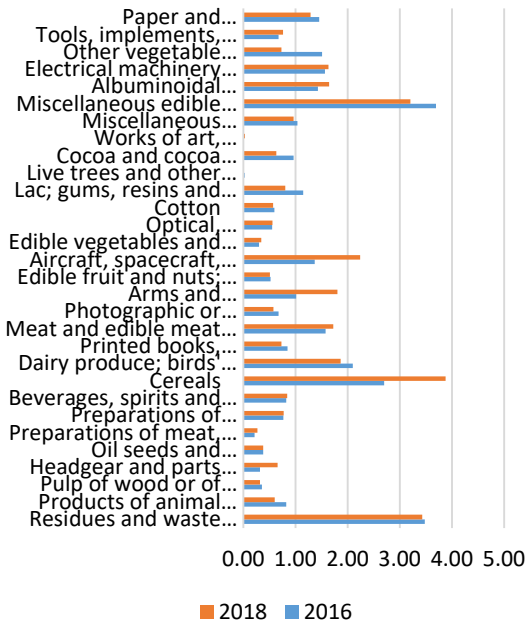
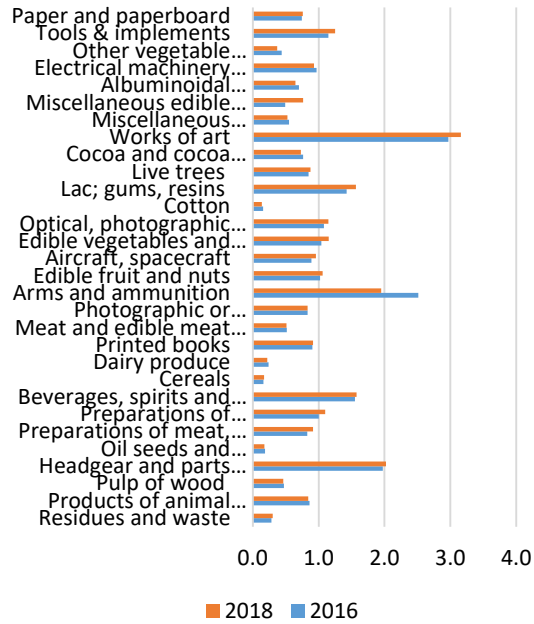


Fig. 61.4. Import Categories of the Philippines in which the U.S. is a Key Import Source: U.S. Import RCA, 2016 & 2018



The import relations of the Philippines with the U.S. is set to remain strong on the back of a slight increase in their trade complementarity. Between 2016 and 2018, the average export RCA of the Philippines has declined and its average import RCA has increased, while the U.S. export RCA has increased and its average import RCA has decreased thus enhancing the prospects of trade expansion. Specifically, the export RCA of the Philippines has declined and the export RCA of the U.S. has increased in optical equipment, meat and edible meat offal, dairy produce, beverages, and miscellaneous chemical products. Although the import relations of the U.S. is likely to remain strong, it may slightly shift towards primary goods and intermediate inputs reflecting the comparative advantage loss of the Philippines in light manufactures. The high-performing import categories of the Philippines with the U.S. are mostly primary goods (e.g., live animals, mineral fuels, cork, prepared feathers, cotton, and animal or vegetable fats and oil).

### *5.3.3. Role of the U.S. in Reducing Asymmetric Interdependence with China*

The dynamics of the bilateral trade relations of the Philippines with the U.S. underscores the importance of the latter in the efforts of the Philippines to strengthen its manufacturing capabilities and rein in its growing asymmetric interdependence with China. But the Philippines' current foreign policy preference towards China is undermining the Philippines' export ties with the U.S. The growing integration of the Philippines with China has resulted in the country's comparative advantage loss in export categories that fall within China's expanding areas of comparative advantage facilitating further dominance of China in the country's trade. To maneuver the Philippines' way out of growing trade dependency and vulnerability to China, the country along with other ASEAN member states must capitalize on the US-China trade war to establish a much less Chinacentric regional and global production network by aggressively building a more integrated and globally oriented ASEAN trading bloc. To be a competitive production base and export platform for both Southern and Northern companies, especially those from Taiwan and the U.S., it is imperative that ASEAN economies deepen and widen production networks within and across industries by first investing on each other to build their complementary strengths. Taiwan and U.S. investments in China have been instrumental in making China a manufacturing powerhouse. Aggressive economic engagement between and among ASEAN, Taiwan and the U.S. holds the strongest potential of restructuring the Asian regional production network away from China making it more diverse and resilient. Hardware and software services from the U.S. are integral to the creation and innovation of exportable products in China, while China and the U.S. rely on Taiwan's high-technology intermediate goods.<sup>48</sup>

## **6. Conclusion**

In pursuit of an independent foreign policy, the Duterte Administration has advanced ties with China. The comparative analysis of the dynamics of the Philippines' trading relationship with China vis-à-vis Taiwan and the U.S., however, finds the Philippines' foreign policy preference toward the Asian economic giant to be anything but supportive of the country's independent foreign policy goal.

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<sup>48</sup> D. Browning, (2020, August 6), U.S.-China Trade War Reshapes Global Electronics Supply Chain, *EET Asia*, <https://www.eetasia.com/us-china-trade-war-reshapes-global-electronics-supply-chain/>



Aside from spawning a vicious cycle of dependency on China, the highly predatory and opportunistic trade relations of the Philippines with China adversely impacts its mutually beneficial trade with the U.S. and Taiwan. Such trade dynamics is set to hasten the asymmetric integration of the Philippines with China upping the country's vulnerability to potential economic coercion from China.

### *Trade Integration of the Philippines with China*

During the first two years of the Duterte Administration, the Philippines has displayed a strong trade growth bias towards China, particularly on the import side in concurrence with a weak trade growth performance with Taiwan and the U.S. The divergent trade growth trajectories of the Philippines with Taiwan, China, and U.S. appear to be unique to the Philippines as indicated by trade intensity patterns, with the Philippines being integrated with China faster than the world on the average chiefly on account of China's growing dominance in its imports. The level of trade integration of the Philippines with China is particularly high in several agricultural products (e.g., edible fruits, pulp of wood, cocoa and cocoa preparations, live trees, products of the milling industry, oilseeds, and wood and articles of wood), a few strategic goods (e.g., iron and steel, and vehicles), and light manufactures (e.g., special woven fabrics, miscellaneous manufactured articles, and toys and games). The growth rates of the Philippines' imports with China in these product categories have exceeded the growth rates of their trade with the world. As in other parts of the world, China accounts for the bulk of the Philippines' imports of umbrellas (96%), ceramic products (81%), footwear (69%), furniture (61%), and articles of iron and steel (59%).

As the Philippines intensifies its trade with China, the country's trade relations with Taiwan have gradually deintensified and, to a lesser extent, with the U.S. particularly on the import side. The marked decline in the Philippines' import intensity with the Taiwan is reflected in eight of the 10 key import categories of the Philippines with Taiwan (i.e., parts and components of electrical machinery and machinery and mechanical appliances, mineral fuels, salt and sulphur, organic chemicals, and articles of iron and steel). Taiwan, however, has remained a key import supplier of the Philippines in medium-and high-technology goods and a few light manufactures, such as knitted or crocheted fabrics (15%), copper (14%), electrical machinery (13%), man-made filaments (12%) and wadding (11%). Similarly, the slight deintensification of the Philippines import relations with the U.S. is reflected in key import categories of the Philippines with the U.S. (i.e., electrical machinery, cereals, aircraft, and optical equipment). The U.S., however, continues to dominate the Philippines' imports of agricultural products and a few consumer products, such as residues and waste (60%), products of animal origin (59%), pulp of wood (49%), headgear (36%), preparations of meat (33%), preparations of vegetables (32%), beverages (29%), cereals (27%) and dairy produce (21%).

### *Role of Foreign Policy Preference*

The contrasting direction of the Philippines' trade intensities with China, Taiwan and the U.S. suggests a more than marginal role of foreign policy preference in shaping the country's overall trade dynamics on account of its second-round effects. The disproportionately high trade intensity of Philippines with China with respect to their trade complementarity at the start of the Duterte Administration concurs with the trade-enhancing effects of regional trade agreements. The trade-

and investment-boosting effects of the ASEAN-China Free Trade Agreement (ACFTA) are expected to be strong between FTA partners that have relatively similar trade structures, such as the Philippines and China. The North American Free Trade Agreement (NAFTA) would have an opposite effect on the Philippines' imports with the U.S. NAFTA has shown to boost U.S. imports with neighboring FTA partners, such as Mexico, a lower middle-income country like the Philippines. The active economic engagement of the current Administration with China has provided another boost to the Philippines-China bilateral trade relations, magnifying the trade effects of the growing trade complementarities between China and the Philippines at the expense of Taiwan. The trade intensity-complementarity linkage of the Philippines with Taiwan, China and the U.S. has further weakened under the China-friendly Duterte Administration in a manner that coincides with the expected impact of the country's foreign policy preference towards China. The Philippines' trade with China has disproportionately intensified with respect to their trade complementarities, while the reverse holds for the country's trade intensity with Taiwan. Foreign policy preference appears to play a more than marginal role amid tight trade competition between China and Taiwan. The competitive trade dynamics of Taiwan and China amplifies the trade-boosting effects of increased trade complementarity between China and the Philippines at the expense of Taiwan. The Philippines' export and import bundles with Taiwan and China have relatively high similarity index. The current Administration's foreign policy preference towards China, however, has a marginal influence on the Philippines' trade intensity with the U.S., which is tightly anchored on trade complementarity making it less vulnerable to foreign policy shifts.

Constituting the second-round trade effects of the Philippines' China-friendly foreign policy, Taiwan and, to a limited extent, the U.S. are showing signs of mounting inclination to explore other markets in response to increasing competition from China. Between 2016 and 2018, the similarity index of the Philippines' export portfolios with Taiwan and China has increased by more than the improvement in the import similarity index of Taiwan and China indicating further tightening of import competition between the two countries with respect to the Philippines. This appears to trigger trade adjustments as intimated by a slight decrease in the export intensity index of the Philippines with Taiwan and growing specialization of the Philippines-Taiwan trade in electrical machinery. As China increasingly dominates Philippine imports, Taiwan also finds itself having to complement China's exports to the Philippines as suggested by a significant decline in the similarity index of the Philippines' import portfolios with Taiwan and China despite a slight increase in the export similarity index of China and Taiwan. While Taiwan's comparative advantage gains in product categories it exports to the Philippines may have prompted Taiwan to explore other export markets, the de-intensification of the Philippines' import relations with Taiwan is more strongly induced by the shift in the country's import specialization patterns away from product categories that Taiwan exports to the Philippines as its trade becomes increasingly defined by China. The marked decline in the Philippines' import intensity with China thus largely reflects the second-round effects of the country's foreign policy preference towards China.

Another manifestation of closer Manila-Beijing diplomatic ties is the contrasting change in the Philippines' trade intensities with Taiwan, China, and the U.S. in favor of China absent strong correspondence with the changes in revealed comparative advantage patterns in several key export and import categories. Under the China-friendly Duterte Administration, the contrasting change in the Philippines' import intensities with China and the U.S. favors China in a wide mix of product

categories, including those in which China has a comparative disadvantage with the U.S. (e.g. aircraft, products of the milling industry, pulp of wood, cocoa and cocoa preparations), albeit China is gaining comparative advantage in some of these product categories. Although the contrasting change of the import intensities of the Philippines with Taiwan and China in favor of China generally reflects China's comparative advantage gains with Taiwan, they have diverged in favor of China in oscilloscopes, ADP, fish and crustaceans, copper, plastics, machinery and mechanical appliances, and articles of iron and steel despite China's comparative advantage loss with Taiwan or sans any significant change in Taiwan's comparative advantage with China. On the export side, the Philippines' export intensities with Taiwan and China have also generally diverged mostly in favor of China on the back of varying changes in RCA patterns. The Philippines maintains an increasingly intense export relations with China in edible fruits, organic chemicals, electrical transformers, boards and panels, petroleum oils, and telephone absent any significant change in Taiwan's comparative advantage with China. Reflecting the strong export ties of the Philippines with the U.S., the contrasting change in the Philippines' export intensities with the U.S. and China favors the U.S. in articles of leather, articles of apparel, and toys and games, ADP, insulated cable wire, telephone sets, trunks and suitcases, and new pneumatic tires sans any significant change in the U.S. comparative advantage with China. Inversely, the Philippines' maintains strong export ties with China vis-à-vis the U.S. in furniture, printing machinery, and preserved fruits, preparations of vegetables, and preparations of meat, edible fruits, clocks, rubber and plastics, and parts of aircraft despite China's comparative advantage gains with the U.S or sans any significant change in the U.S. comparative advantage with China.

#### *Downsides of South-South Trade with China*

The deepening trade ties of the Philippines with China under the Duterte Administration is a cause for concern chiefly on two counts. Firstly, the growing trade integration of the Philippines with China has spawned a vicious cycle of trade dependency that is bound to limit the country's development prospects and, concomitantly, undermine its pursuit of an independent foreign policy. The predatory and opportunistic import relations of the Philippines with China has increased its import dependency on China across product categories, including those in which China does not have a comparative advantage. In effect, the Philippines is helping the Asian economic giant expands its areas of comparative advantage facilitating further dominance of China in the country' trade. Considering China's ravenous appetite for raw materials and intermediate goods, the Philippines' exportation of these commodities to China does not only serve to strengthen China's manufacturing capabilities, it can also further weaken the linkage of the country's export sector with the rest of the economy; confines its export portfolios to low-technology intermediate goods that have strong import demand in China; hastens resource depletion; and, ultimately, obstructs its pathway to sustainable development. As it stands, the Philippines' exports of high-technology goods continue to expand sans a significant increase in their value-added due to their limited backward and forward linkages. Such trade dynamics renders the Philippines an increasingly lousy trading partner even to China. While China is the Philippines' largest trading partner, the latter is China's 23<sup>rd</sup> largest trading partner, down by three places from 2016 as it becomes a less important source of imports to China. With the expansion of China's areas of comparative advantage, the import growth prospects of the Philippines have remained stronger than its export growth prospects with China, widening its already massive trade deficit with China, particularly in agricultural goods, light manufactures (e.g., footwear, furniture,



miscellaneous manufactured articles, ceramic products, umbrellas, wadding, musical instruments, other made-up textile fiber, works of art, articles of apparel, carpets, toys, glass and glassware, and edible vegetables) and strategic goods (e.g., vehicles, arms and ammunitions, mineral fuels, and aircraft).

Secondly, the intensification of the Philippines' trade with China tends to adversely impact the country's mutually beneficial trade with Taiwan and the U.S. making its overall trade dynamics less resilient and dynamic. The country's bilateral trade dynamics with Taiwan and the U.S. have shown to be supportive of its efforts to diversify its export portfolio and move up the global value chain. The investment-driven vertical intra-industry trade of the Philippines with Taiwan, especially in medium-and high technology goods have enhanced the channels through which trade supports investments, boosting the Philippines' exporting capacity and increasing its gainful participation in network trade in medium-and high technology goods. Both the Philippines and Taiwan have recorded significant comparative advantage gains in medium-and high-technology goods. At the same time, Taiwan is becoming an increasingly favored trading partner of the Philippines in a few light manufactures and agricultural products reflecting the reshoring of manufacturing activities from China to Taiwan and the growing attractiveness of the Philippines as an export platform for Taiwanese companies amid the U.S.-China trade conflict and rising labor cost in China. The Philippines' highly diversified export portfolio with the U.S. underscores the importance of the latter in the country's efforts to strengthen its manufacturing capabilities and rein in its growing asymmetric interdependence with China.

#### *Trade Policy Reset*

In pursuit of an independent foreign policy, it is imperative for the Philippines to maneuver its way out of the vicious cycle of trade dependency and vulnerability to China by aggressively engaging its traditional and non-traditional trading and investment partners. At the same time, the Philippines would have to revisit its investment deals with China under the Belt and Road Initiative (BRI) to preclude unsustainable, large-scale resource extraction and exportation of raw materials to China that only serves to further weaken the forward and backward linkages of the country's export sector. The economic decoupling of multinational companies from China in light the US.-China trade war and rising labor cost in China provides favorable conditions for the Philippines to further diversify away from raw materials and intermediate inputs and towards consumer products. In this regard, Taiwanese companies have much to contribute in enabling the Philippines to directly and indirectly penetrate the growing Chinese market for light manufactures and consumer products and, as a result, reduce its trade imbalance with China. Trade and investment linkages of the Philippines with Taiwan would therefore have to be strengthened to further integrate itself into the global value chain and expand its exporting capacity so it may be able to take full advantage of emerging export opportunities and effectively utilize the U.S. GSP and all its bilateral and regional trade agreements before China completely erodes its local manufacturing base. Moreover, the Philippines along with other ASEAN member states must capitalize on U.S.-China trade tension to establish a less Chinacentric regional and global production network. This entails aggressively building a more integrated ASEAN trading bloc. To be a competitive production base and export platform for both Southern and Northern companies, especially those from Taiwan, Japan and the U.S., ASEAN



economies should deepen and widen production networks within and across industries by first investing on each other to build their complementary strengths. Aggressive economic engagement between and among ASEAN, Taiwan, Japan, and the U.S. holds the strongest potential of restructuring the Asian regional production network away from China making it more diverse and resilient.



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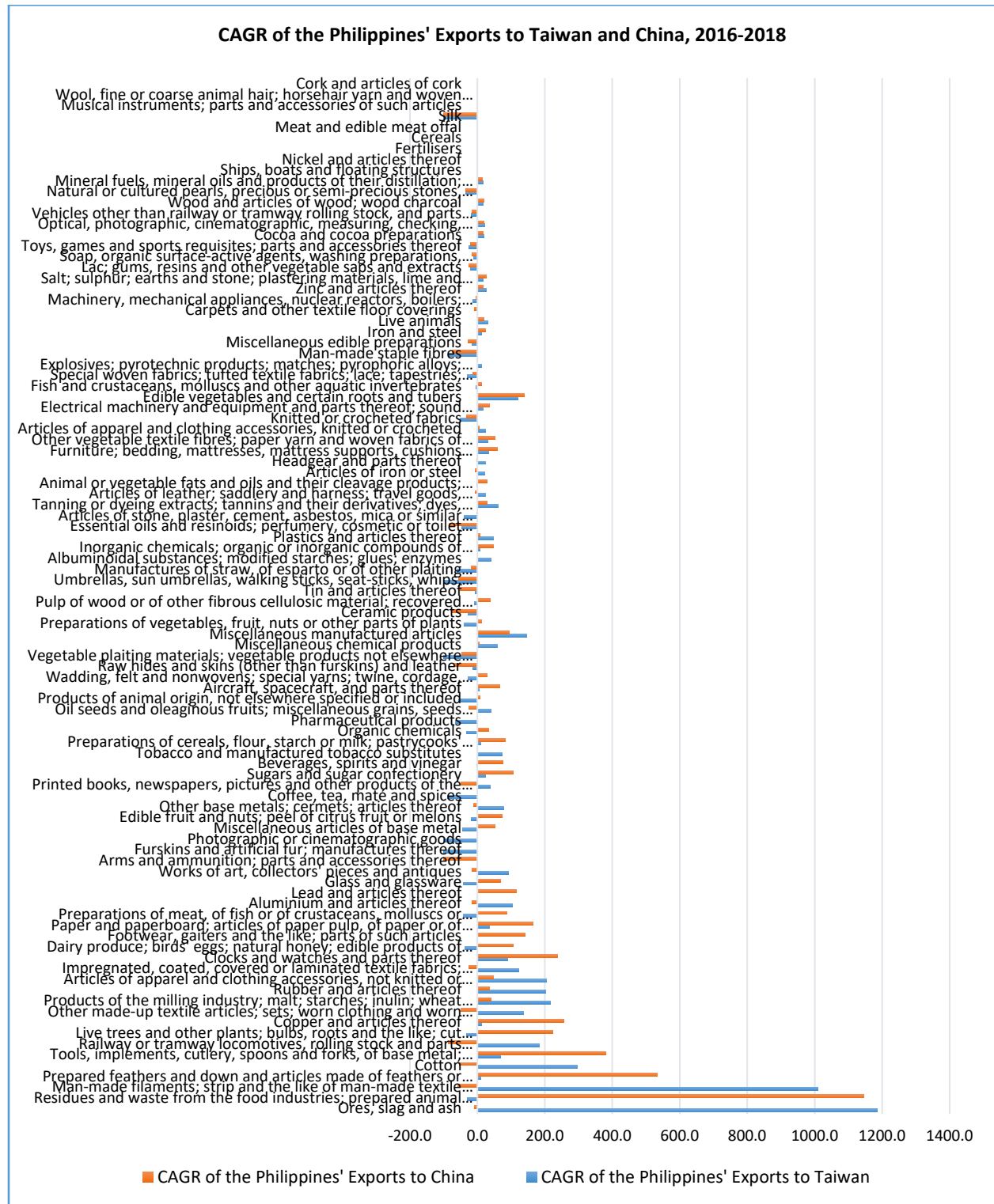
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Appendix A. CAGR of the Philippines' Exports to Taiwan and China, 2016-2018

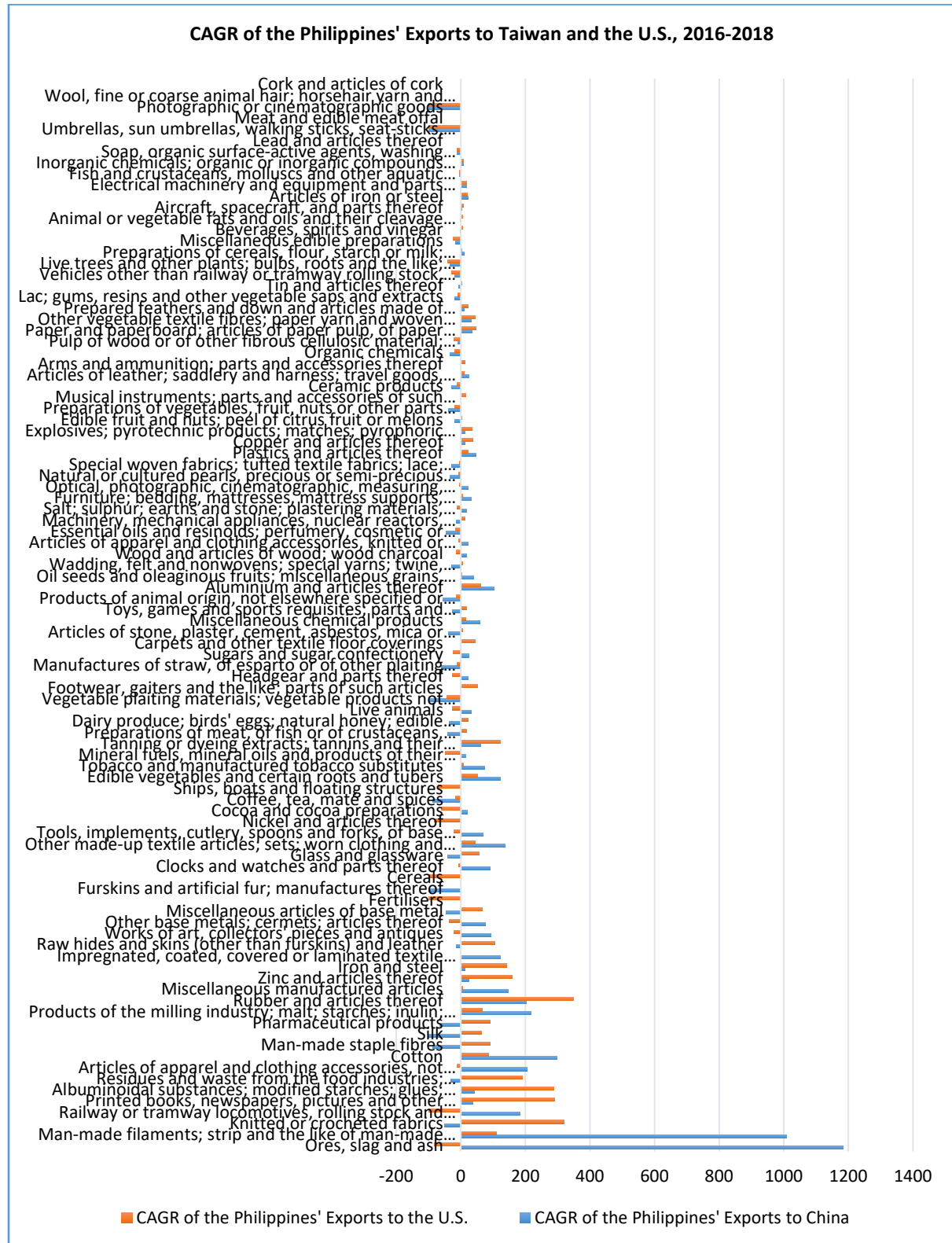


Appendix B. CAGR of the Philippines' Exports to China and the U.S., 2016-2018

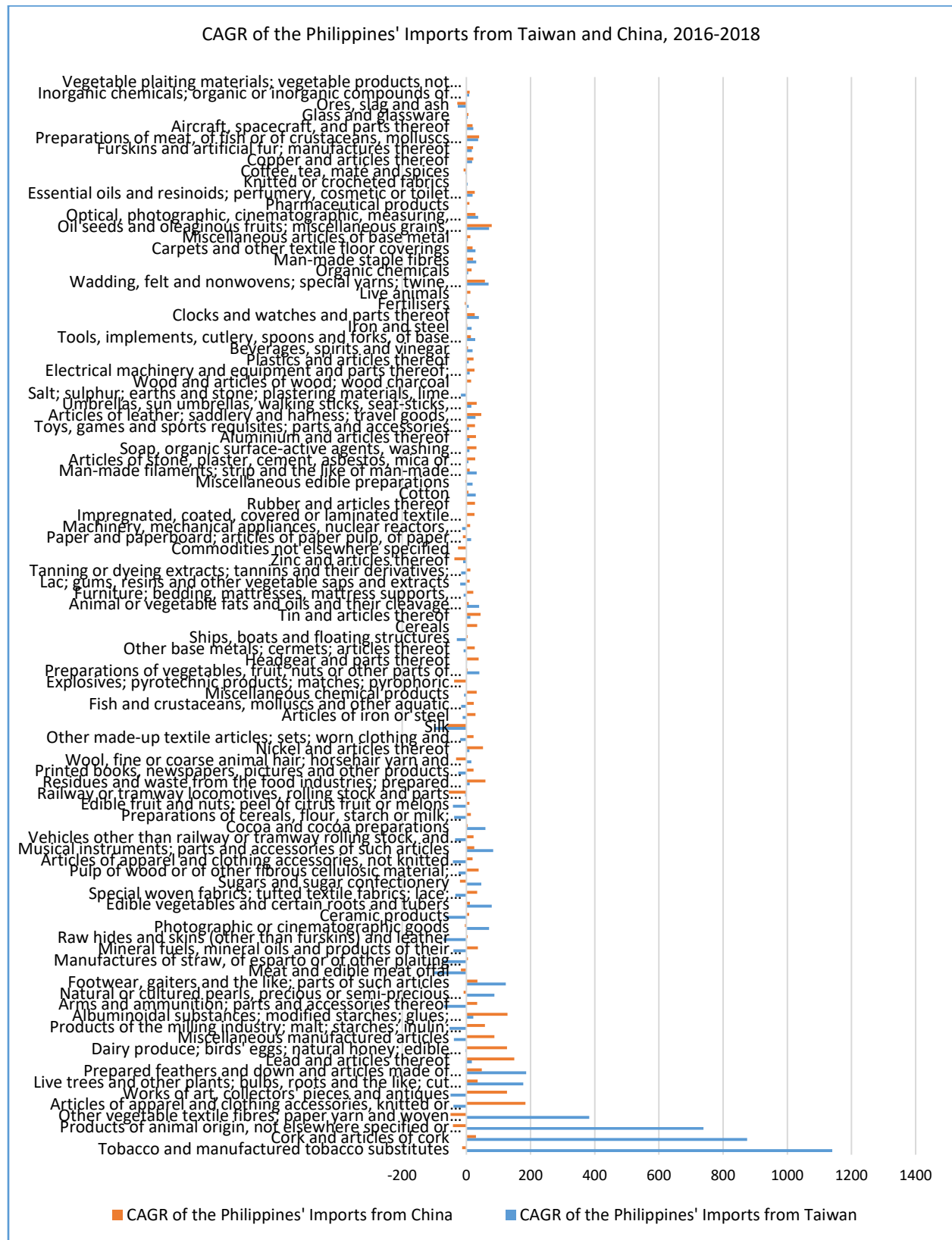




Appendix C. CAGR of the Philippines' Exports to Taiwan and the U.S., 2016-2018



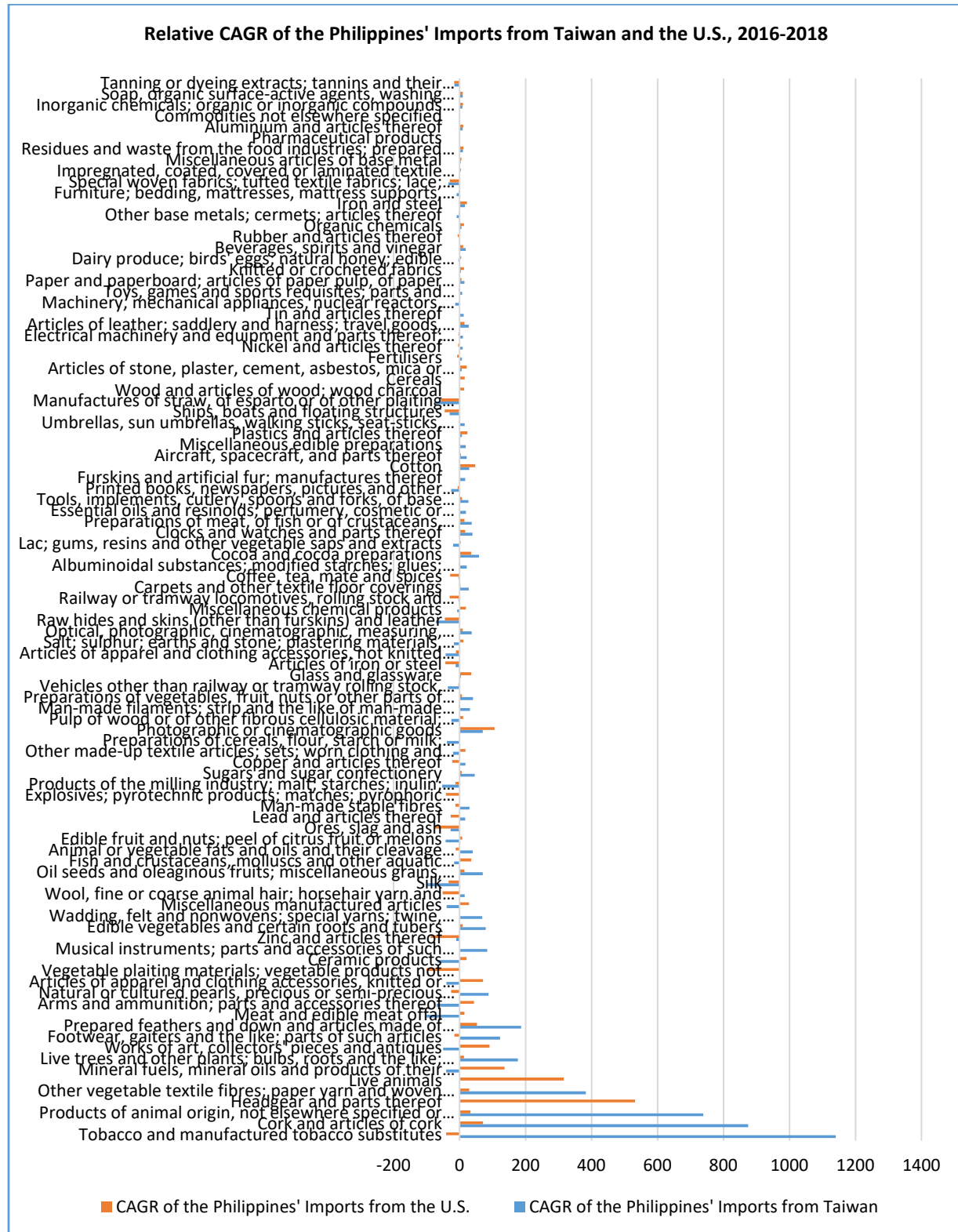
Appendix D. Relative Growth Rates of the Philippines' Imports from Taiwan and China, 2016-2018



Appendix E. CAGR of the Philippines' Imports from China and the U.S., 2016-2018



Appendix F. CAGR of the Philippines' Imports from Taiwan and China, 2016-2018

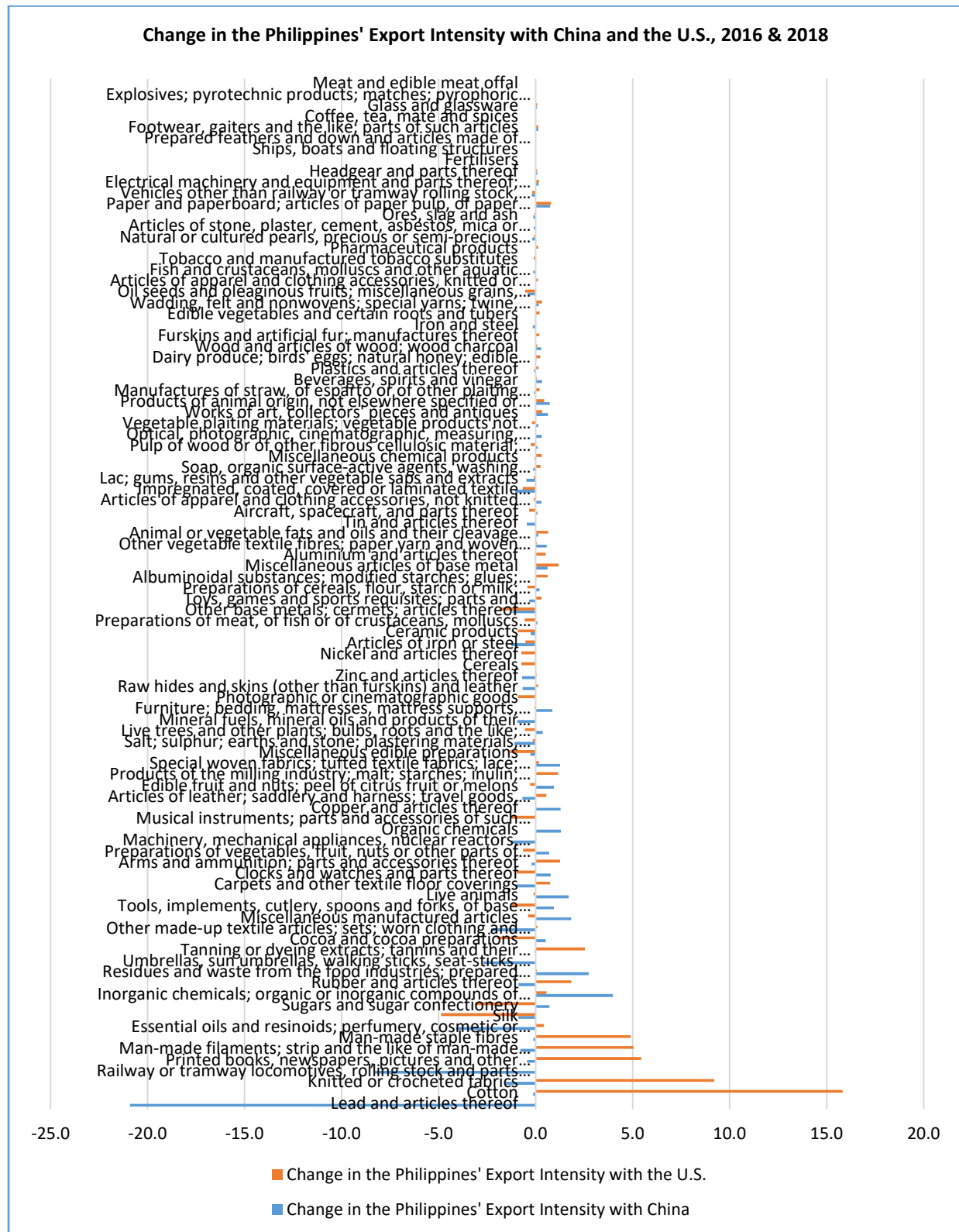




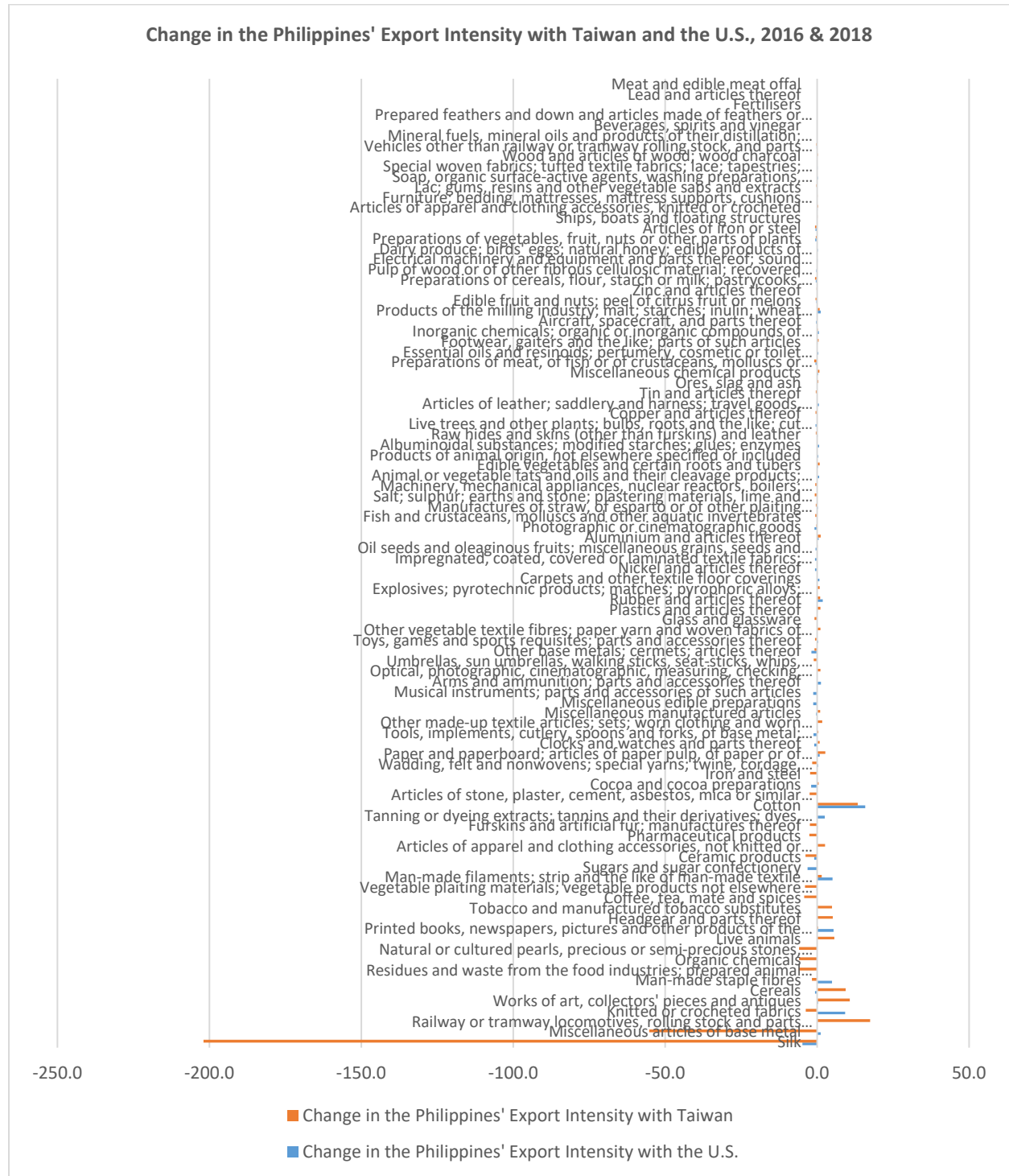
Appendix G. Change in the Philippines' Export Intensity with China and Taiwan, 2016 & 2018



Appendix H. Change in the Philippines' Export Intensity with China and the U.S., 2016 & 2018



Appendix I. Change in the Philippines' Export Intensity with Taiwan and the U.S., 2016 & 2018



Appendix J. Change in the Philippines' Import Intensity with Taiwan and China, 2016 & 2018





Appendix K. Change in the Philippines' Import Intensity with Taiwan and China, 2016 & 2018



Appendix L. Change in the Philippines' Import Intensity with Taiwan and the U.S., 2016 & 2018

