

Perspectives of economic integration between ASEAN and Latin America

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ABSTRACT

This article provides main economic developments in the trade activities of the ASEAN, MERCOSUR, and Pacific Alliance with its major trading partners and among these regions. The article presents current data, statistics, and trade indicators –top export and import products, export and import diversification, export and import concentration of product markets, complementarity, export similarity, and trade overlap– commonly used in negotiations to support discussions for trade agreements. According to these trade indicators, an ASEAN-Pacific Alliance preferential trade agreement has a better potential for trade expansion than an ASEAN-MERCOSUR preferential trade agreement. In any case, as the level of trade among the regional areas is small, a possible ASEAN-MERCOSUR and ASEAN-Pacific Alliance Preferential Trade Agreements could be a turning point to increased trade among countries.

Keywords: Preferential Trade Agreements, Trade Indicators, ASEAN, MERCOSUR, Pacific Alliance.

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Perspectivas de integración económica entre la ASEAN y América Latina

RESUMEN

Este artículo presenta los principales desarrollos en las actividades comerciales de la ASEAN, el MERCOSUR y la Alianza del Pacífico con sus principales socios comerciales y también entre estas regiones. El artículo muestra datos actuales, estadísticas e indicadores comerciales –principales productos de exportación importación, diversificación de las exportaciones e importaciones, concentración de las exportaciones e importaciones de los mercados de productos, complementariedad, similitud de las exportaciones y superposición comercial– que se utilizan común mente en las negociaciones para respaldar las discusiones sobre acuerdos comerciales. Según estos indicadores, un Acuerdo Comercial Preferencial ASEAN-Alianza del Pacífico tiene mejor potencial de expansión en comparación con un Acuerdo Comercial Preferencial ASEAN-MERCOSUR. En cualquier caso, dado que el nivel de comercio entre las áreas regionales es pequeño, un posible Acuerdo Comercial Preferencial ASEAN-MERCOSUR y ASEAN-Alianza del Pacífico podría ser un punto de inflexión para un mayor comercio entre países.

Palabras clave: Acuerdos Comerciales Preferenciales, Indicadores Comerciales, ASEAN, MERCOSUR, Alianza del Pacífico.

Introduction

The ASEAN², and Latin American countries have signed preferential trade agreements (PTA). In Latin America, Pacific Alliance³ countries have been dynamic to negotiate PTAs, while MERCOSUR⁴ has just a few PTAs. Although they have had different patterns to pursue PTAs, both Pacific Alliance and Mercosur could start negotiations with ASEAN in the future.

²¹ ASEAN member countries are Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, The Philippines, Singapore, Thailand, and Vietnam

³ Pacific Alliance member countries are Chile, Colombia, Mexico, and Peru.

⁴ MERCOSUR member countries are Argentina, Brazil, Paraguay, and Uruguay.

Trade relations between Southeast Asia and Latin America were analyzed in some studies previously by Mikic & Jakobson (2010), Bartesagui (2014), Chaow sangrat (2016), and Rubiolo (2019). Mikic & Jakobson (2010) use trade indicators and found the trade between South Asia and Latin American countries was low, a situation that persists after years. Bartesagui (2014) uses socio-economic statistics to assess ASEAN and MERCOSUR differences and the bilateral trade that has space for growth. Chaow sangrat (2016) analyses the ASEAN-Pacific Alliance trade that had grown and emphasized the relevance of this economic relationship. Rubiolo (2019) claims the bilateral relations of Argentina, Brazil, and Chile with ASEAN are more symmetrical than with China. Other works deals with regional integration, as by Pang (2003), Aminian, Fung & Ng (2009), and Rojas & Terán (2017). Pang (2003) compares ASEAN Free Trade Area and MERCOSUR, categorizing them as small regional free trade arrangements that would increase their world economic share if they expand together trade and foreign direct investment. Aminian, Fung & Ng (2009) claim East Asia has integrated via markets, but agreements have integrated Latin America; the regional integration initially via markets reduces the internal political resistance to negotiate agreements, hence has increased the number of trade agreements in East Asia. Rojas & Terán (2017) analyze agreements between Pacific Alliance and East Asia countries and conclude that most are not related to trade or investment.

Before PTAs negotiations begin, the first step is to study the bilateral trade between countries or regions. Thereby, this article provides an overview of the main developments in the trade activities of the ASEAN, MERCOSUR, and Pacific Alliance. It focuses on what has happened with ASEAN bilateral trade relations with MERCOSUR and Pacific Alliance countries in recent years. The main objective of this article is to present the current data and statistics to support discussions for a possible ASEAN-MERCOSUR and ASEAN-Pacific Alliance Preferential Trade Agreements. The first section analyzes preferential trade agreements and conversations between regions and countries; the second section describes the overall trade in the regions and the main MERCOSUR and Pacific Alliance countries. The third section evaluates a set of trade indicators relevant before negotiations to a trade agreement.

Data sources in this article related to trade are from the World Bank's World Integrated Trade Solution (WITS)⁵, and related to GDP

⁵ World Bank. WITS. <https://wits.worldbank.org>

are from World Bank Open Data (WBOD)⁶. Trade data classification are SITC Revision 3, and all calculations of exports and imports top products and trade indicators are according to the 2-digit code (division code) for 2019 data.

1. Preferential trade agreements: institutional considerations

MERCOSUR⁷ has preferential trade agreements with Egypt, India, Israel, and Southern African Customs Union (SACU), besides economic complementation agreements and partial scope agreements with some Latin American countries. Unlike MERCOSUL, Pacific Alliance is an economic bloc that allows member countries to sign individually preferential trade agreements; thus, Chile, Colombia, Mexico, and Peru have many preferential trade agreements. These countries have preferential trade agreements with partners as Canada, United States, European Union, European Free Trade Association, China, and Japan, notably with economic importance in the world.

On the other side, ASEAN has been active in negotiating preferential trade agreements with Pacific Basin countries. ASEAN has agreements with Australia-New Zealand, China, India, Japan, South Korea, Hong Kong, and ASEAN is a member of the Regional Comprehensive Economic Partnership (RCEP)⁸. ASEAN countries also have bilateral preferential trade agreements signed and in effect: Brunei has an agreement with Japan; Indonesia has agreements with Japan, Australia, Chile, and Pakistan; Malaysia has agreements with Japan, New Zealand, Pakistan, Australia, Chile, India, and Turkey; the Philippines has agreements with Japan, and the European Free Trade Association (EFTA); Singapore has agreements with EFTA, the United States, Sri Lanka, India, Japan, Korea, New Zealand, Australia, Panama, Gulf Cooperation Council, European Union, Peru, China, Taiwan, Turkey, Costa Rica, and the United Kingdom; Laos and Thailand have a bilateral trade agreement; Thailand also has agreements with China, Australia, New Zealand, Japan, Peru, and Chile; Vietnam has agreements with European Union, Korea, Chile, Japan, Eurasian Economic Union, and the United Kingdom.

⁶ World Bank. Data. <https://data.worldbank.org>

⁷ MERCOSUR. <https://www.mercosur.int/relacionamiento-externo/red-de-acuerdos/>

⁸ ASEAN. <https://asean.org/asean-economic-community/asean-free-trade-area-afta-council/>

ASEAN has established ASEAN committees in third countries to promote cooperation among countries⁹. In MERCOSUR countries, there are ASEAN Committees in Argentina and Brazil; in Pacific Alliance countries, there are ASEAN Committees in Chile and Peru (ASEAN, 2021c, p. 2). A regional organization, as ASEAN, to have a committee to conduct partnerships with third countries would be a strategy to improve economic relations, besides consulates and embassies from each ASEAN country.

According to ASEAN Secretariat (2021a, p. 2), ASEAN-MERCOSUR Ministerial Meetings has held in 2008 and 2017, hence just twice between these regional organisms, and there has not had institutional follow-up since the last meeting. In contrast, ASEAN-Pacific Alliance institutional relations have been dynamic; according to ASEAN Secretariat (2021b, p. 1) four ASEAN countries are observers members of Pacific Alliance, since 2014 there was six ASEAN-Pacific Alliance Ministerial Meetings, and there has already been five Committee of Permanent Representatives to ASEAN (CPR) and the Group of External Relations of the Pacific Alliance (GER) meetings. In consequence, activities to implement the ASEAN-Pacific Alliance Framework for Cooperation, which includes economic issues, have progressed.

Concerning Pacific Alliance and ASEAN countries where members in the same regional agreements and fora, Chile, Mexico, Peru, Brunei, and Malaysia are members in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and Brunei, Chile, Indonesia, Malaysia, Mexico, Peru, Philippines, Singapore, Thailand, and Vietnam are in the Asia-Pacific Economic Cooperation (APEC). Even though a country be a member of the same agreements or for a do not reflect to increase the trade directly, but it helps to begin negotiations for future bilateral and regional trade agreements.

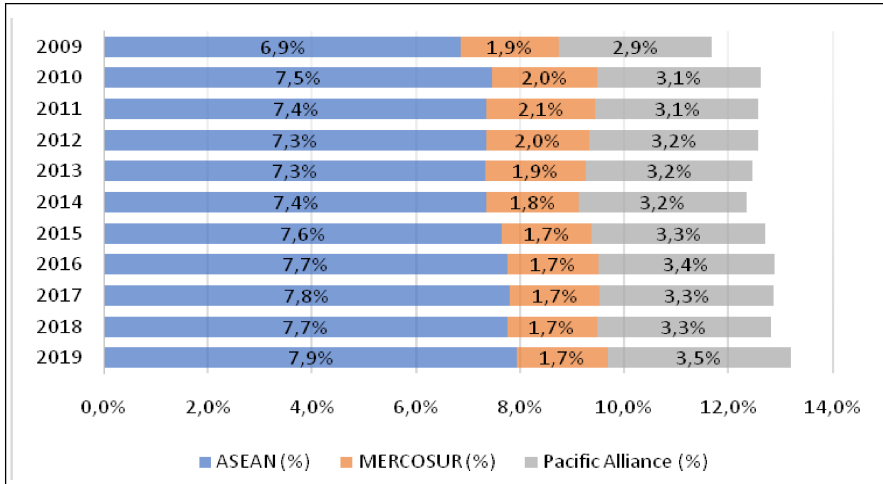
2. Overall trade of ASEAN, MERCOSUR, and Pacific Alliance

Figures 1 and 2 show the share of ASEAN, MERCOSUR, and Pacific Alliance exports and imports in world trade from 2009 to 2019. The share of ASEAN exports to the world increased from 6.9 % in 2009 to 7.9 % in 2019, while the share of the Pacific Alliance to the world increase from 2.9 % in 2009 to 3.5 % in 2019. On the other side, the share of MERCOSUR exports to the world decreased slightly from

⁹ ASEAN. <https://asean.org/asean/asean-structure/actc/overview-on-actcs-2/>

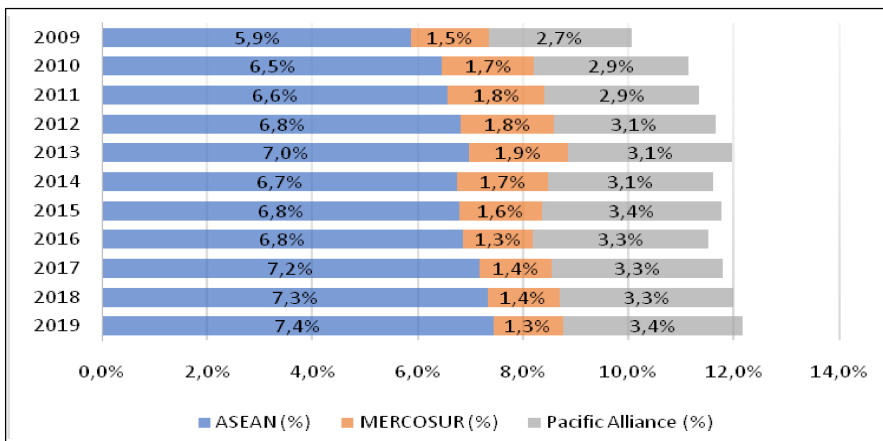
1.9 % in 2009 to 1.7 % in 2019. On the imports side, the share of ASEAN imports from the world increased from 5.9 % in 2009 to 7.4 % in 2019, while the share of Pacific Alliance imports from the world increase from 2.7 % in 2009 to 3.4 % in 2019. On the other side, the share of MERCOSUR imports from the world decreased slightly from 1.5 % in 2009 to 1.3 % in 2019.

Figure 1
Exports to World



Source: Calculated by the author based on data from WITS

Figure 2
Imports from World



Source: Calculated by the author based on data from WITS

2.1. ASEAN trade activities

In 2019, ASEAN exported US\$ 1.4 trillion in goods and imported US\$ 1.3 trillion. Since 2009, ASEAN exports have grown 6.21 % per year on average, while ASEAN imports have increased 7.17% per year on average in nominal terms, but these percentages decreased in the period from 2015 to 2019, when ASEAN exports grew 1.80 % per year on average and ASEAN imports grew 2.2 % per year on average. ASEAN exports as a share of GDP contracted from 51.5 % in 2009 to 46.1 % of GDP in 2019, while ASEAN imports contracted slightly from 43.9 % in 2009 to 42.6 % in 2019 of GDP.

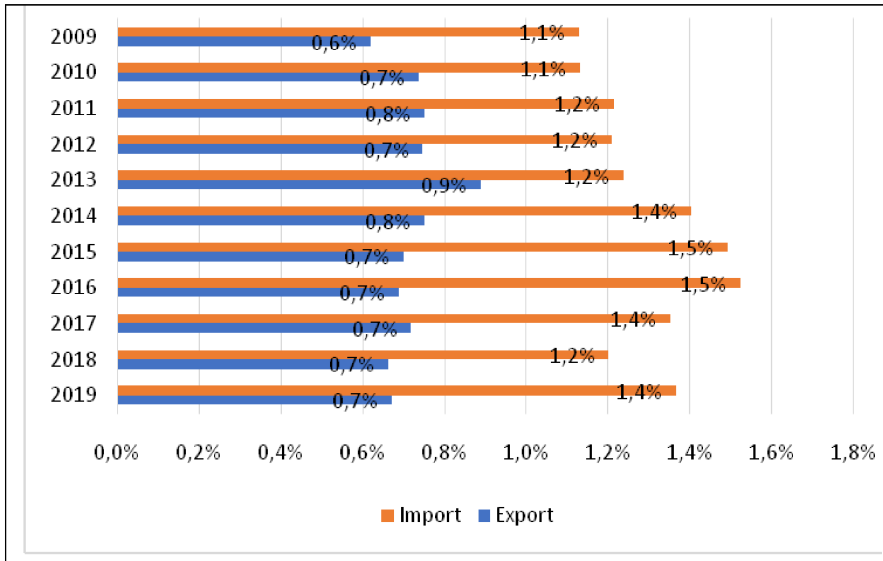
China was the top ASEAN trading partner in 2019, with US\$ 490.1 billion in total goods trade, followed by the United States (US\$ 292.1 billion), and Japan (US\$219.7 billion). China was the largest destination for ASEAN exports, accounted for 14.0 % of all exports from the ASEAN, and the largest source of ASEAN imports accounted for 21.8 % of all imports to the ASEAN. The United States was the second-largest destination for ASEAN exports, accounted for 13.1 %, and the third-largest source of ASEAN imports accounted for 8.1 %. Japan was the third-largest destination for ASEAN exports, which accounted for 7.7 %, and the second-largest source for ASEAN imports accounted for 8.3 %.

Figure 3 shows the share of ASEAN trade with MERCOSUR from 2009 to 2019. The share of ASEAN exports to MERCOSUR increased slightly from 0.6 % in 2009 to 0.7 % in 2019, while the share of ASEAN imports from MERCOSUR also increased slightly from 1.1 % in 2009 to 1.4 % in 2019.

Figure 4 shows the share of ASEAN trade with the Pacific Alliance from 2009 to 2019. The share of ASEAN exports to the Pacific Alliance increased slightly from 0.4 % in 2009 to 0.5 % in 2019, while the share of ASEAN imports from Pacific Alliance increased from 0.7 % in 2009 to 1.1 % in 2019.

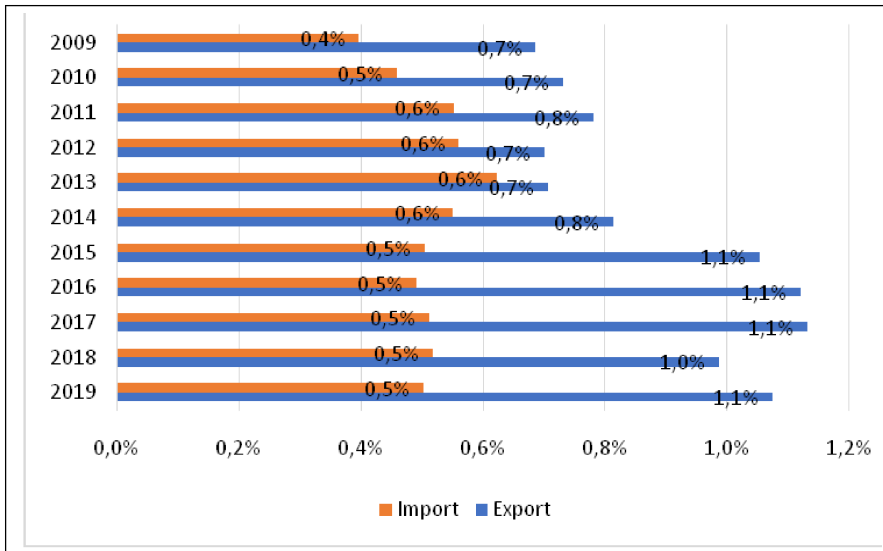
MERCOSUR and Pacific Alliance accounted for a tiny share of ASEAN trade, ASEAN exports to MERCOSUR accounted for 0.7 % of all exports. ASEAN imports from MERCOSUR accounted for 1.4 % of all imports. In comparison, ASEAN exports to Pacific Alliance accounted for 1.1 % of all exports, and ASEAN imports from Pacific Alliance accounted for 0.5 % of all imports in 2019.

Figure 3
ASEAN Trade with MERCOSUR (%)



Source: Calculated by the author based on data from WITS

Figure 4
ASEAN Trade with Pacific Alliance (%)



Source: Calculated by the author based on data from WITS

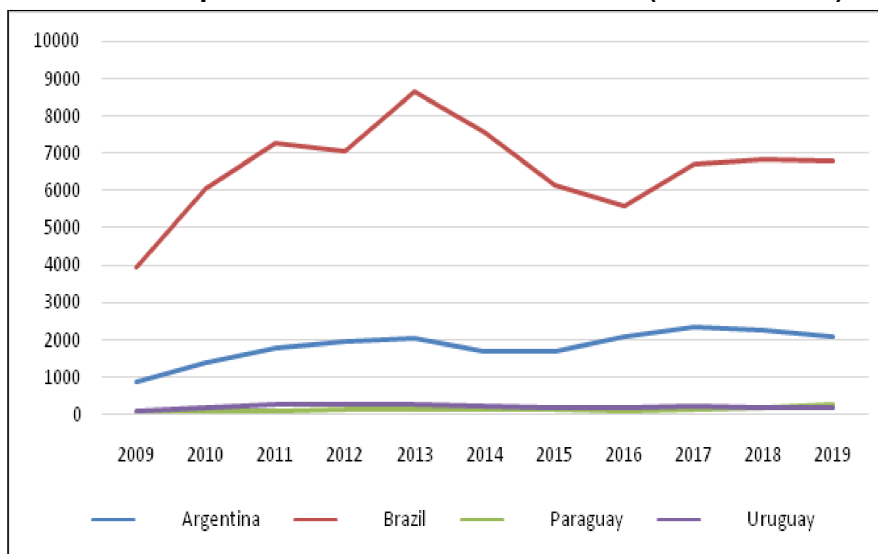
2.2. MERCOSUR trade activities

In 2019, MERCOSUR exported US\$ 306.0 billion in goods and imported US\$ 240.0 billion. MERCOSUR exports as a share of GDP expanded from 10.7 % in 2009 to 12.9 % of GDP in 2019, while MERCOSUR imports expanded from 8.8 % to 10.1 % of GDP.

Figure 5 and figure 6 show ASEAN-MERCOSUR countries trade from 2009 to 2019. ASEAN exports to MERCOSUR have grown 8.13 % per year on average since 2009; however, it decreased -0.04 % per year on average in the period from 2015 and 2019. On the other side, ASEAN imports from MERCOSUR have grown 9.4 % per year on average since 2009; however, they decreased to 1.6 % per year on average in the period from 2015 and 2019.

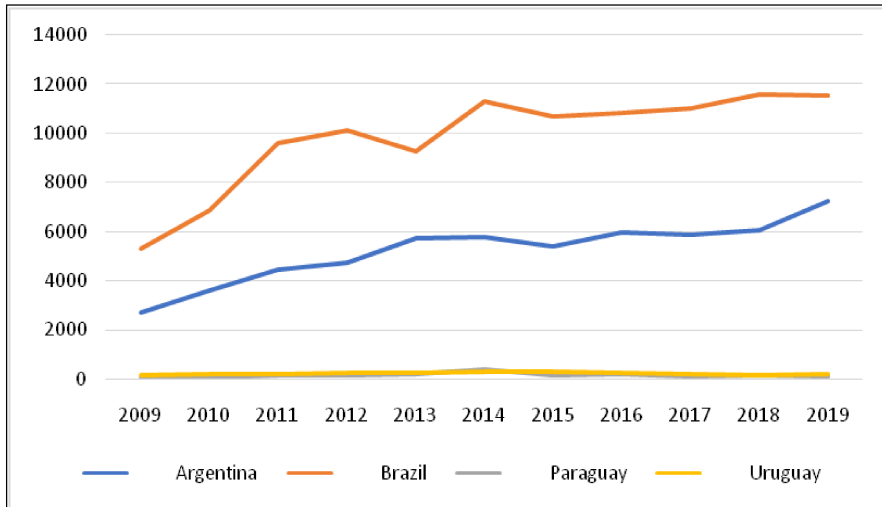
Among MERCOSUR countries, Brazil was the leading destination for ASEAN exports, followed by Argentina, and Brazil was the leading source of ASEAN imports, followed by Argentina. ASEAN imports from Argentina and Brazil exceed ASEAN exports to Argentina and Brazil during this period. ASEAN exports to Argentina grew 10.50 % per year

Figure 5
ASEAN Exports to MERCOSUR Countries (US\$ millions)



Source: Calculated by the author based on data from WITS

Figure 6
ASEAN Imports from MERCOSUR Countries (US\$ millions)



Source: Calculated by the author based on data from WITS

on average from 2009 to 2019, and it grew 4.68 % per year on average from 2015 to 2019. On the other side, ASEAN imports from Argentina grew 11.0 % per year on average from 2009 to 2019, and it grew 5.0 % per year on average from 2015 to 2019. ASEAN exports to Brazil grew 7.1 % per year on average from 2009 to 2019, and it decreased – 1.2 % per year on average from 2015 to 2019. On the other side, ASEAN imports from Brazil 9.0 % per year on average from 2009 to 2019, and it grew 0.5 % per year on average from 2015 to 2019.

Argentina exports to ASEAN accounted for 9.8 % of all exports, and Argentina imports from ASEAN accounted for 5.5 % of all imports in 2019. Brazil exports to ASEAN accounted for 5.3 % of all exports, and Brazil imports from ASEAN accounted for 4.5 % of all imports in 2019.

Table 1 shows the top five Argentina exports to ASEAN in 2019. All of them primary commodities, except the third; these five products comprised 94.67% of the total value of Argentina’s exports to ASEAN. On the other side, table 2 shows the top five Argentina imports from ASEAN in 2019, all of them manufactured goods; these five products comprised 58.51 % of the total value of Argentina imports from ASEAN. Argentina exports to ASEAN were heavily concentrated in feeding stuff for animals, and cereal and cereal preparations, which comprised 88 % of all Argentina exports to ASEAN.

Table 1
Top five Argentina exports to ASEAN (2019)

Rank	Product	Share
1	Feeding stuff for animals	50.49%
2	Cereals and cereal preparations	37.02%
3	Special transactions and commodities not classified according to kind	3.15%
4	Leather, leather manufactures and dressed furskins	2.34%
5	Fish, crustaceans, mollusks, and aquatic invertebrates and preparations	1.65%

Source: Calculated by the author based on data from WITS

Table 2
Top five Argentina imports from ASEAN (2019)

Rank	Product	Share
1	Office machines and automatic data-processing machines	17.36 %
2	Road vehicles	13.99%
3	Power-generating machinery and equipment	11.58%
4	Electrical machinery, apparatus and appliances, and electrical parts	8.07%
5	Footwear	7.52%

Source: Calculated by the author based on data from WITS

Concerning Argentina's trade protectionism¹⁰, the simple average tariff that Argentina imposed on imports was 13.5 %, while the trade-weighted tariff was 12.2 %, and the maximum rate of the tariff was 35 % in 2019. Dividing products between agricultural products and non-agricultural products: for agricultural products, the simple average tariff was 10.3 %, the trade-weighted tariff was 10.5 %, and the maximum

¹¹ Source: WTO Data. <https://data.wto.org/>

rate of the tariff was 35 %; for non-agricultural products, the simple average tariff was 14 %, the trade-weighted tariff was 12.4 %, and the maximum rate of the tariff was 35 %. Besides tariff, other trade barriers are essential to analyze; among products imported from Argentina, 84.2 % of the products are affected by one or more nontariff measures, and just 15.81 % of the products are not affected by nontariff measures¹¹.

Table 3 shows the top five Brazil exports to ASEAN in 2019, all of them primary commodities; these five products comprised 65.28 % of the total value of Brazil exports to ASEAN. On the other side, table 4 shows the top 5 Brazil imports from ASEAN in 2019, all of them

Table 3
Top five Brazil exports to ASEAN (2019)

Rank	Product	Share
1	Metalliferous ores and metal scrap	18.25%
2	Petroleum, petroleum products, and related materials	17.90 %
3	Feeding stuff for animals	11.75%
4	Cereals and cereal preparations	9.10%
5	Textile fibers and their wastes	7.55%

Source: Calculated by the author based on data from WITS

Table 4
Top five Brazil imports from ASEAN (2019)

Rank	Product	Share
1	Office machines and automatic data-processing machines	23.26%
2	Electrical machinery, apparatus and appliances, and electrical parts thereof	20.73 %
3	Road vehicles (including air-cushion vehicles)	5.95%
4	Articles of apparel and clothing accessories	4.40%
5	Crude rubber	4.00%

Source: Calculated by the author based on data from WITS

¹⁰ World Bank. WITS. <https://wits.worldbank.org/tariff/non-tariff-measures/en/type-count/country/ARG>

manufactured goods, except the last one; these five products comprised 58.34 % of the total value of Brazil imports from ASEAN.

Regarding Brazil's trade protectionism¹², the simple average tariff that Brazil imposed on imports was 13.4 %, while the trade-weighted tariff was 10 %, and the maximum tariff rate was 35 % in 2019. Dividing products between agricultural products and non-agricultural products: for agricultural products, the simple average tariff was 10.1 %, the trade-weighted tariff was 12.3 %, and the maximum rate of the tariff was 35 %; for non-agricultural products, the simple average tariff was 13.9 %, the trade-weighted tariff was 9.9 %, and the maximum rate of the tariff was 35 %. Related to other trade barriers, among products imported from Brazil, 72.3 % of products are affected by one or more nontariff measures, and 27.7 % of the products are not affected by nontariff measures¹³.

2.3. Pacific Alliance trade activities

In 2019, Pacific Alliance exported US\$ 616.0 billion in goods and imported US\$ 619.5 billion. Pacific Alliance exports as a share of GDP expanded from 24.2 % in 2009 to 29.3% of GDP in 2019, while Pacific Alliance imports grew from 23.3% to 29.5 % of GDP.

Figure 7 and figure 8 show ASEAN-Pacific Alliance countries trade from 2009 to 2019. ASEAN exports to Pacific Alliance grew 10.8 % per year on average from 2009 to 2019, and it grew 9.6 % per year on average from 2015 to 2019. On the other side, ASEAN imports from Pacific Alliance grew 9.8 % per year on average from 2009 to 2019, and it grew 4.3 % per year on average from 2015 to 2019.

Among Pacific Alliance countries, Mexico was the leading destination for ASEAN exports, followed by Chile, and Mexico was the leading source of ASEAN imports, followed again by Chile. ASEAN exports to Mexico exceed imports from this bloc during the period, while ASEAN imports from Chile exceed exports between 2008 and 2013 and ASEAN exports to Chile exceed imports after 2014.

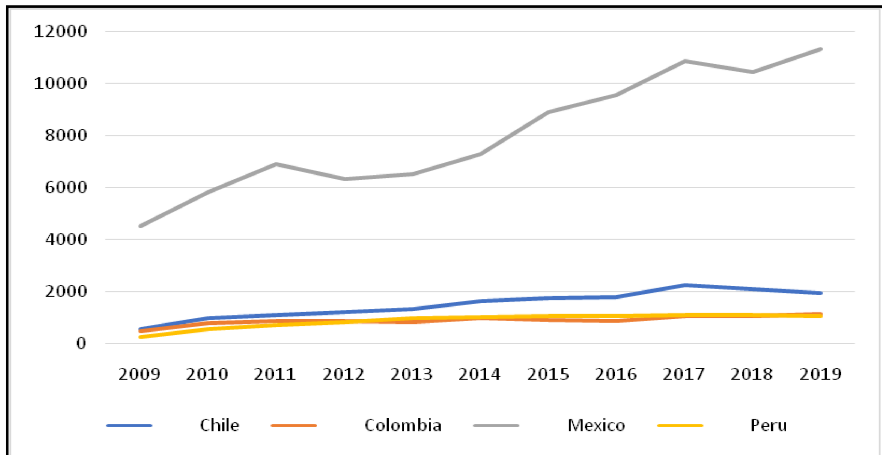
ASEAN exports to Chile grew 14.5 % per year on average from 2009 to 2019, and it grew 6.9 % per year on average from 2015 to 2019. On the other side, ASEAN imports from Chile grew 4.8 % per year on average from 2009 to 2019, and it grew 0.8 % per year on average from 2015 to 2019.

¹² Source: WTO Data. <https://data.wto.org/>

¹³ World Bank. WITS. <https://wits.worldbank.org/tariff/non-tariff-measures/en/type-count/country/BRA>

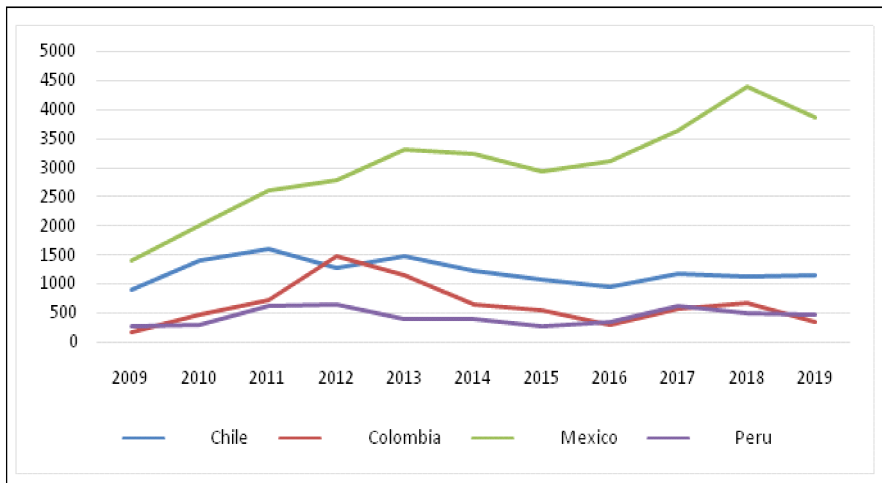
ASEAN exports to Mexico grew 10.1 % per year on average from 2009 to 2019, and it grew 11.5 % per year on average from 2015 to 2019. On the other side, ASEAN imports from Mexico grew 12 % per year on average from 2009 to 2019, and it grew 6.8 % per year on average from 2015 to 2019.

Figure 7
ASEAN Exports to Pacific Alliance Countries (US\$ millions)



Source: Calculated by the author based on data from WITS

Figure 8
ASEAN Imports from Pacific Alliance Countries (US\$ millions)



Source: Calculated by the author based on data from WITS

Mexico exports to ASEAN accounted for 0.4 % of all exports, and Mexico imports from ASEAN accounted for 6.7 % of all imports. Chile exports to ASEAN accounted for 1.7 % of all exports, and Chile imports from ASEAN accounted for 3.0 % of all imports.

Table 5 shows the top five Mexico exports to ASEAN in 2019, all of them manufactured products, except the first; these five products comprised 76.2 % of the total value of Mexico exports to ASEAN. On the other side, table 6 shows the top five Mexico imports from ASEAN in 2019, all manufactured goods, except the fourth. These five products comprised 80.0 % of the total value of Mexico imports from ASEAN.

Table 5
Top five Mexico exports to ASEAN (2019)

Rank	Product	Share
1	Special transactions and commodities not classified according to kind	20.6%
2	Telecommunications and sound-recording and reproducing apparatus and equipment	18.1%
3	Office machines and automatic data-processing machines	14.3%
4	Road vehicles	13.7%
5	Electrical machinery, apparatus and appliances, and electrical parts	9.6%

Source: Calculated by the author based on data from WITS

Table 6
Top five Mexico imports from ASEAN (2019)

Rank	Product	Share
1	Electrical machinery, apparatus and appliances, and electrical parts	47.2%
2	Office machines and automatic data-processing machines	12.6%
3	Telecommunications and sound-recording and reproducing apparatus and equipment	10.8%
4	Special transactions and commodities not classified according to kind	5.8%
5	Road vehicles	3.6%

Source: Calculated by the author based on data from WITS

Regarding Mexico’s trade protectionism¹⁴, the simple average tariff that Mexico imposed on imports was 7.1 %, while the trade-weighted tariff was 4.2 %, and the maximum tariff rate was 75 % in 2019. Dividing products between agricultural products and non-agricultural products: for agricultural products, the simple average tariff was 13.9 %, the trade-weighted tariff was 15.5 %, and the maximum rate of the tariff was 75 %; for non-agricultural products, the simple average tariff was 6 %, the trade-weighted tariff was 3.5 %, and the maximum rate of the tariff was 50 %. Related to other trade barriers, among products imported from Mexico, 48.4 % of products are affected by one or more nontariff measures, and 51.6 % of the products are not affected by nontariff measures¹⁵.

Table 7 shows the top five Chile exports to ASEAN in 2019, all primary commodities; these five products comprised 79.5 % of the total value of Chile exports to ASEAN. On the other side, table 8 shows the top five Chile imports from ASEAN in 2019, all manufactured goods. These five products comprised 63.6 % of the total value of Chile imports from ASEAN.

Table 7
Top five Chile exports to ASEAN (2019)

Rank	Product	Share
1	Metalliferous ores and metal scrap	25.2%
2	Non-ferrous metals	22.3%
3	Fish, crustaceans, mollusks and aquatic invertebrates and preparations	18.8%
4	Pulp and waste paper	6.6%,
5	Cork and wood	6.5%

Source: Calculated by the author based on data from WITS

¹⁴ Source: WTO Data. <https://data.wto.org/>

¹⁵ World Bank. WITS. <https://wits.worldbank.org/tariff/non-tariff-measures/en/type-count/country/MEX>

Table 8
Top five Chile imports from ASEAN (2019)

Rank	Product	Share
1	Telecommunications and sound-recording and reproducing apparatus and equipment	20.3%
2	Road vehicles	18.9%
3	Footwear	11.5%
4	Articles of apparel and clothing accessories	7.7%
5	Office machines and automatic data-processing machines	5.3%

Source: Calculated by the author based on data from WITS

Concerning Chile's trade protectionism,¹⁶ the simple average tariff, the trade-weighted tariff, and the maximum rate of the tariff were 6 %, even diving for agricultural products and non-agricultural products in 2019. Related to other trade barriers, among products imported from Chile, 59.7 % of products are affected by one or more nontariff measures, and 40.3 % of the products are not affected by nontariff measures¹⁷.

In comparing these countries' top exports and imports in products, ASEAN and Argentina, ASEAN and Brazil, and ASEAN and Chile have a complementary trade, since ASEAN mainly exports manufactured products to these markets. In contrast, ASEAN mainly imports primary commodities from these countries; hence, bilateral trade among nations is clearly inter-industrial. However, ASEAN and Mexico have a similar trade since ASEAN mainly exports manufactured products to Mexico, likewise ASEAN mainly imports manufactured products from Mexico, hence ASEAN-Mexico top five trade products are mostly intra-industrial trade.

¹⁶ Source: WTO Data (<https://data.wto.org/>) Accessed July 17, 2021.

¹⁷ World Bank. WITS. <https://wits.worldbank.org/tariff/non-tariff-measures/en/type-count/country/CHL>. Accessed July 28, 2021.

3. Trade indicators

This section comprises trade indicators used in preparation for trade agreement negotiations because they reveal the structure of trade: the sectorial Hirschmann-Herfindahl index for exports, and for imports, the Export Diversification index, the Import Diversification index, the Complementarity index, the Export Similarity index, and the Trade Overlap index¹⁸. All these indicators are calculated according to the 2-digit code (division code), SITC revision 3, for 2019 data.

Table 9 shows the Sectorial Hirschmann-Herfindahl index¹⁹ for exports to ASEAN, Argentina, Brazil, Chile, and Mexico. The highest value is for Chile (0.40) that indicates the exports are more concentrated than others. On the opposite side, ASEAN (0.24) and Brazil (0.24) have the lowest value, hence with a large number of product markets.

Table 9
Hirschmann-Herfindahl index for exports

Area/Country	Index
ASEAN	0.24
Argentina	0.31
Brazil	0.26
Chile	0.40
Mexico	0.32

Source: Calculated by the author based on data from WITS

Table 10 show the export diversification index.²⁰ In this indicator, Chile has the highest value (0.78) that indicates a greater dependence on a relatively small number of products exported. The values are also high to Argentina (0.66) and Brazil (0.54); hence, they also mean a greater dependence.

¹⁸ The trade indicators definitions are in Asian Development Bank (2010).

¹⁹ Hirschmann-Herfindahl index ranges a value from 0 to 1.

²⁰ Export diversification index ranges a value from 0 to 1.

Table 10
Export diversification index

Region/Country	Index
ASEAN	0.25
Argentina	0.66
Brazil	0.54
Chile	0.78
Mexico	0.33

Source: Calculated by the author based on data from WITS

Table 11 shows the Sectorial Hirschmann-Herfindahl index²¹ for imports from ASEAN, Argentina, Brazil, Chile, and Mexico. The values are closer among them, hence, each one with a relatively large number of products sources.

Table 11
Hirschmann-Herfindahl index for imports

Region/Country	Index
ASEAN	0.25
Argentina	0.20
Brazil	0.21
Chile	0.22
Mexico	0.23

Source: Calculated by the author based on data from WITS

Table 12 shows the import diversification index for ASEAN, Argentina, Brazil, Chile, and Mexico. The highest value is for Argentina (0.26), followed by Chile (0.24); however, concerning the index values, all countries indicate a relatively small dependence on the number of products imported

²¹ Hirschmann-Herfindahl index ranges from 0 to 1.

Table 12
Import diversification index

Region/Country	Index
ASEAN	0.19
Argentina	0.26
Brazil	0.22
Chile	0.24
Mexico	0.20

Source: Calculated by the author based on data from WITS

Table 13 shows complementarity index²² between ASEAN exports and Argentina, Brazil, Chile, and Mexico imports. High degrees of complementarity are to the pairs ASEAN-Chile (30 %) and ASEAN-Mexico (45 %), and the low degrees of complementarity are to the pairs ASEAN-Argentina (20 %) and ASEAN-Brazil (24 %). Hence, an ASEAN-Pacific Alliance preferential trade agreement has a better potential for trade expansion compared to an ASEAN-MERCOSUR preferential trade agreement.

Table 13
Complementarity index

Region/Countries	%
ASEAN-Argentina	20
ASEAN-Brazil	24
ASEAN-Chile	30
ASEAN-Mexico	45

Source: Calculated by the author based on data from WITS

Table 14 shows the export similarity index²³ to the pairs ASEAN-Argentina, ASEAN-Brazil, ASEAN-Chile, and ASEAN-Mexico. The highest similarity index value is to ASEAN-Mexico (60 %), which reveals they may be competitors in exports to the markets. Still, it may indicate a potential for intra-industry trade with a preferential trade agreement.

²² Complementarity index ranges from 0 to 100 per cent.

²³ Export similarity index ranges from 0 to 100 per cent.

On the other hand, ASEAN-Chile similarity index value is the lowest (20 %), which may be a potential for inter-industry trade with a preferential trade agreement. Likewise, the identical interpretation is possible respectively to the ASEAN-Brazil (40 %) and ASEAN-Argentina (28 %) similarity indexes. However, as ASEAN-Chile and ASEAN-Mexico indexes are more imbalanced between them compared to ASEAN-Brazil and ASEAN-Argentina, so providing intra-industry trade and inter-industry trade as well, that may complement, an ASEAN-Pacific Alliance preferential trade agreement has a better potential compared to an ASEAN-MERCOSUR preferential trade agreement.

Table 14
Export similarity index

Region/Countries	%
ASEAN-Argentina	28
ASEAN-Brazil	40
ASEAN-Chile	20
ASEAN-Mexico	61

Source: Calculated by the author based on data from WITS

Table 15 shows the trade overlap index²⁴ for ASEAN, Argentina, Brazil, Chile, and Mexico. This index indicates the proportion of intra-industry trade relative to inter-industry trade; hence, intra-industry trade has more significance in ASEAN (0.39) and Mexico (0.30) than Brazil (0.21) and Argentina (0.15), and it is insignificant in Chile (0.09), in consequence, Chile is close to a pure inter-industry trade. The ASEAN and Mexico index numbers match and confirm the bilateral trade between Mexico and ASEAN related to top products exported most manufactured products.

²⁴ Trade overlap index ranges from 0 to 1.

Table 15
Trade Overlap index

Region/Country	Index
ASEAN	0.39
Argentina	0.15
Brazil	0.21
Chile	0.09
Mexico	0.30

Source: Calculated by the author based on data from WITS

Conclusion

Institutional conversations between ASEAN and the Pacific Alliance have been more intense than between ASEAN and MERCOSUR, and some of the ASEAN and Pacific Alliance countries are members of APEC and CPTPP.

The share of ASEAN trade in the world trade increased between 2009 and 2019, as the share of the Pacific Alliance as well; however, the share of MERCOSUR trade in the world trade decreased slightly. ASEAN's main partners are in the Pacific Basin: China, Japan, and the United States, while the share of ASEAN trade with MERCOSUR and the share of ASEAN trade with the Pacific Alliance do not surpass one-digit percent.

Among MERCOSUR countries, Brazil was the leading trade partner for ASEAN, followed by Argentina, and Argentina exports to ASEAN accounted for almost 10 % of all Argentina exports. Argentina's top exports to ASEAN are commodities from agriculture and fishery, while Argentina's top imports from ASEAN are manufactured goods. Brazil's top exports to ASEAN are commodities from agriculture and mining, while Brazil's top imports from ASEAN are mainly manufactured goods.

Among Pacific Alliance countries, Mexico was the leading trade partner for ASEAN, followed by Chile. Mexico's top exports to ASEAN are manufactured goods and top imports from ASEAN as well. All Chile's top exports to ASEAN are primary commodities, while all Chile's top imports from ASEAN are manufactured goods.

Regarding trade indicators, Chile's exports are product-market concentrated with a greater dependence on a small number of the

products exported comparing to Mexico and ASEAN. On the other side, Argentina, Brazil, Chile, Mexico, and ASEAN have many products sources and small dependence on the number of products imported.

Concerning trade protectionism, Mexico and Chile are less protectionist than Argentina and Brazil.

According to the results of the complementarity index, the export similarity index, and the trade overlap, an ASEAN-Pacific Alliance preferential trade agreement has a better potential for trade expansion compared to an ASEAN-MERCOSUR preferential trade agreement.

In any case, as the level of trade among the regional areas is small, a possible ASEAN-MERCOSUR and ASEAN-Pacific Alliance Preferential Trade Agreements could be a turning point to increased trade among countries.

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