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Examining the potential for cross-South Pacific trade: ASEAN and Latin America

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Examining the Potential for Cross-South Pacific Trade:

ASEAN and Latin America

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Abstract:

This paper discusses the potential for cross-South Pacific trade between selected Southeast Asian and Latin American economies. The objective of this discussion is to identify obstacles for more intensive trade between the observed countries. Firstly, the paper reviews trends in trade flows and trade patterns between the selected economies, and by using several trade performance indicators it finds the level of trade still relatively low. It then discusses the possible reasons for this state of affairs. It focuses on a review of tariffs, trading costs and other possible impediments to trade. Paper also considers how trade relations among these countries could be improved. It provides a background into the features of the trade agreements that have been signed among the countries belonging to these two sub-regions in an attempt to identify if any of them could be used as a “driver” for future integration.

Keywords: ASEAN, Latin America, trade entropy, complementarity, trade agreements, cross-Pacific trade, noodle bowl

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I. Introduction

Trade in Asian economies has plummeted at double digit rates for the first time in modern history when the demand for their products collapsed under the pressure of the financial downturn and subsequently the economic global crisis during 2008 and 2009. The loss of traditional export markets has forced export-led Asian economies to consider shifting the source of their future growth towards different drivers: domestic demand and other export markets. While there are sound arguments for pursuing the goal of achieving more balanced consumption and savings in Asia, which would lead into a larger domestic absorption of production, it is obvious that domestic demand in Asia cannot support their growth at levels that were experienced in years preceding the crisis. Many small economies cannot rely on their own domestic demand as an engine of growth. Therefore, Asian economies have become keen to diversify their export destination markets to reduce overall risk from exogenous shifts in growth and demand for their exports. The strategy, inter alia, relies on the intensification of South-South trade (and investment) – not only within developing Asia, but also with developing countries from outside the region, including Latin America.

Economic Commission for Latin America and the Caribbean (ECLAC) has recently prepared several comprehensive reports pertinent to this topic of furthering cooperation between Latin America and Asia in the area of trade and investment (see list of references for details). These reports single out geographical distance as a major factor affecting economic cooperation between the two regions, but also list disparities between regions in areas of economics, politics, culture and history as other significant obstacles. Furthermore, a relevant factor affecting cooperation in the past has been the approach to the role of trade in economic growth: Asian economies on average have been hailed as the “model” of export-led growth, while Latin America as a whole was more or less associated with inward-looking strategies for growth. However these categorizations are broad and one has to hasten to say that within Asia, as within Latin America, there are economies that do not fit within the general stereotype.

By complementing the recent reports of ECLAC with some additional statistical information on trade flows and patterns, this paper discusses the potential for cross-South Pacific trade between selected Southeast Asian and Latin American economies.² The objective of this discussion is to identify obstacles for more intensive trade between the observed countries. The paper proceeds as follows. Section 2 reviews trends in trade flows and trade patterns between the selected economies, and by using several trade performance indicators it finds the level of trade still relatively low. Section 3 then discusses the possible reasons for this state of affairs. It focuses on a review of tariffs, trading costs and other possible impediments to trade. Section 4 considers how trade relations among these countries could be improved. It provides a background into the features of the trade agreements that have been signed among the countries belonging to these two sub-regions in an attempt to identify if any of them could be used as a “driver” for future integration. Section 5 concludes the discussion.

² While there is a relatively large amount of trade across the Pacific Ocean when East Asian countries and North American countries are accounted for, the level of trade across the southern parts of the Pacific Ocean (involving Southeast Asia and Latin American countries) is still very low. This paper focuses only on these two sub-regions, and also observes only the largest contributors to trade between them. “Cross-South Pacific” is still used as the simplest description of trade flows direction being analyzed. A group of six countries, includes members of Association of Southeast Asian Nations (ASEAN), that is Singapore, Viet Nam, Philippines, Thailand, Indonesia and Malaysia (named ASEAN thereafter) and a group of five countries from Latin America includes Argentina, Brazil, Chile, Mexico and Venezuela (named LAC thereafter). Even though Panama has significant trade with ASEAN it was omitted from analysis after large amounts of unclassified trade with Singapore were identified. Data was retrieved from COMTRADE through WITS based on SITC rev 3 classification of trade data. The ASEAN countries were used as reporting countries in all tables and figures unless stated otherwise.

Before proceeding, some general observations about the openness to trade of different Asian and Latin American sub-regions in the world are summarized in table 1 by using indicators of trade exposure known as export propensity and import dependence. Export propensity is the share of export goods and services in a country's Gross Domestic Product (GDP), while import dependence measures the share of imports of goods and services in a country's GDP. Based on these two indicators, it appears that among all sub-regions of Asia, Southeast Asia is the most integrated into the global economy. In Latin America, it is the Caribbean countries that rely on trade the most. This is not surprising given that both indicators suffer from a size-bias and show higher values for the smaller economies.³ In figure 1, these two indicators are presented exclusively for ASEAN and LAC.

Table 1. Level of integration in the global economy

Sub-region	Export propensity (%)		Import dependence (%)	
	2007	2008	2007	2008
East and Northeast Asia	30.16	30.34	26.26	27.59
North and Central Asia	29.82	32.21	19.07	19.54
South Asia	13.04	14.81	19.80	24.81
Southeast Asia	67.92	68.04	61.56	64.42
Pacific island economies	18.29	19.58	21.43	21.37
Caribbean	46.65	49.86	65.59	74.00
Central America	25.98	26.01	30.73	31.82
South America	18.30	18.41	14.59	16.01

Source: World Development Indicators on-line, The World Bank

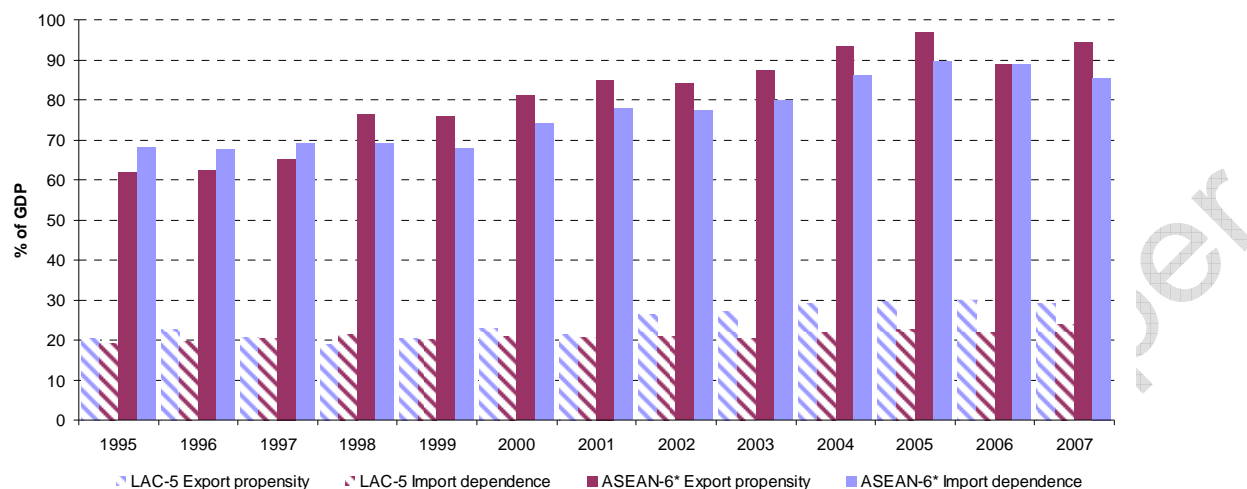
* Southeast Asia does not include Brunei Darussalam, and Myanmar and Cambodia are only included in 2007.

A closer look at the two chosen regions identifies large differences among countries with respect to the two indicators which are masked when only the averages for the groups are used, as seen in Figure 1. This is due to the small economies in ASEAN, such as Singapore or Malaysia, where export propensity and import dependence regularly reach more than 100 per cent.

In addition to the levels of trade exposure being at different levels between groupings, they also follow different trends. There is an unambiguous increase in both import dependence and export propensity in ASEAN throughout the period from 1995 to 2007. In Latin America, an upward trend is only evident for export propensity from 2002 to 2006, while import dependence is more stable and moves up by around 20 per cent over the period.

³ For more details on these indicators check Mikic and Gilbert, 2009.

Figure 1. Export propensity and import dependence in ASEAN and LAC*

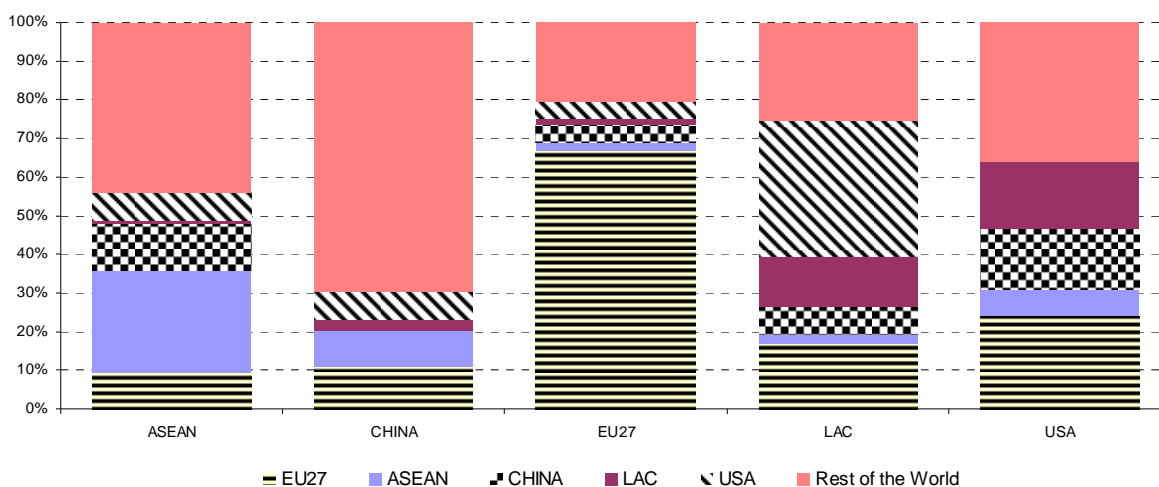


Source: World Bank, World Development Indicators, except for Singapore for 1995-2000, for which period data was sourced from Statistics Singapore (<http://www.singstat.gov.sg/>)

* Figures for ASEAN and LAC are simple averages of national-level indicators.

Although Table 1 and Figure 1 are very telling, these calculations can also be deceiving. While they identify which sub-regions are more “open”, they do not tell us information regarding openness towards whom. Figure 2 shows how little trade crosses the southern waters of the Pacific Ocean. It also shows that while the European Union’s exports are mostly done within the EU (intra-EU), intra-ASEAN export is less than 30 per cent, with a very small share taken by LAC. In the case of LAC’s, the intra-regional exports would be very large if the USA were included into the group; without the USA however, it is less than 15 per cent. As a number of countries in the ASEAN and LAC groupings are also members of Asia-Pacific Economic Cooperation (APEC), one would expect that this should have provided more opportunities for cooperation including trade. So far, however, not many of these opportunities materialized into enhanced trade. Of those that did materialize, most are associated with China’s 2001 entry into global and cross-Pacific trade. There is no doubt that China will play a major role in the evolution of cross-Pacific trade but it is also important to understand the other sources of potential trade that are associated with the ASEAN members.

Figure 2. Global export patterns (2007)



Note: Based on 2007 data as the impact of the crisis on trade already started in 2008.

Source: Calculated by authors based on the export data from COMTRADE downloaded using WITS

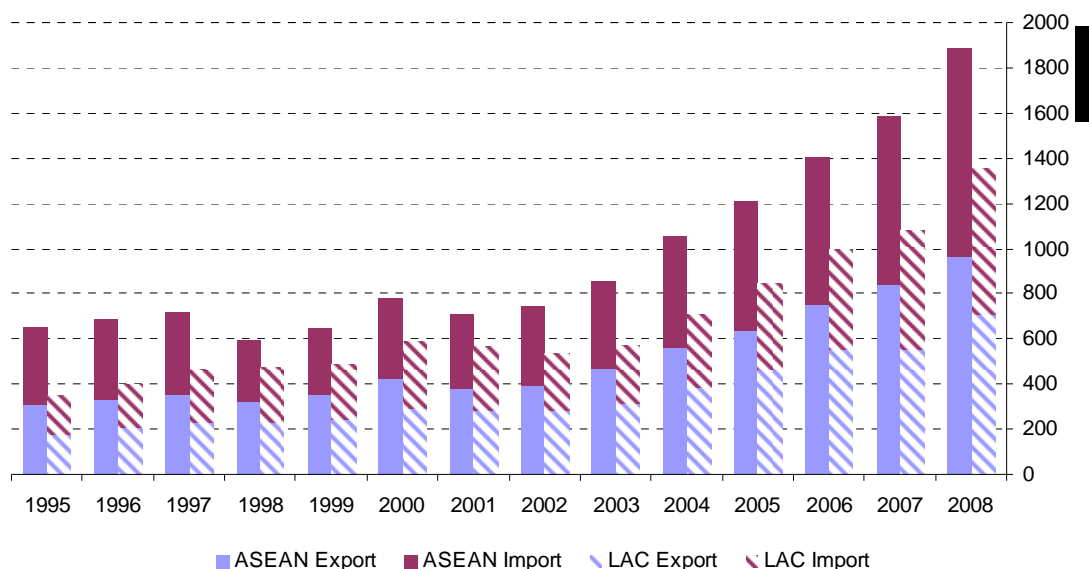
II. Overall trends in ASEAN and Latin American trade

Trade of both ASEAN and LAC with the world has been increasing very fast (see figure 3). ASEAN has been running a trade surplus with the world since 1998, in contrast to LAC, which has had a trade deficit with the world until 2000. LAC is also characterized by less stable trade growth, especially in the early years of the observed period, which covers 1995 – 2008. Both ASEAN and LAC are associated with substantial trade expansion, meaning that their trade increased by more than 300 per cent from 1995 to 2008 in nominal terms.

Bilateral trade between ASEAN and LAC is illustrated in Figures 4 and 5. Figure 4 shows the value of mutual trade from the ASEAN’s perspective (i.e. ASEAN as a reporter), while Figure 5 provides LAC’s perspective. There is an obvious discrepancy in trade data reported by the sub-regions. ASEAN reported values of export to LAC are growing much faster and are at a higher absolute dollar values in recent years than what was reported by LAC as imported from ASEAN. While part of this variance is explained by the difference in export (FOB) and import (CIF) values, the gap is much larger than what would be the sum of possible transport, insurance and other trade related costs. This presents problems as one does not have a clear indication of which trade data to use in analysis. We proceed by first showing this discrepancy and then we continue by analyzing trends from ASEAN’s perspective.⁴

⁴ That is, trade data is downloaded as reported by ASEAN.

Figure 3. Total trade of ASEAN and LAC with the world

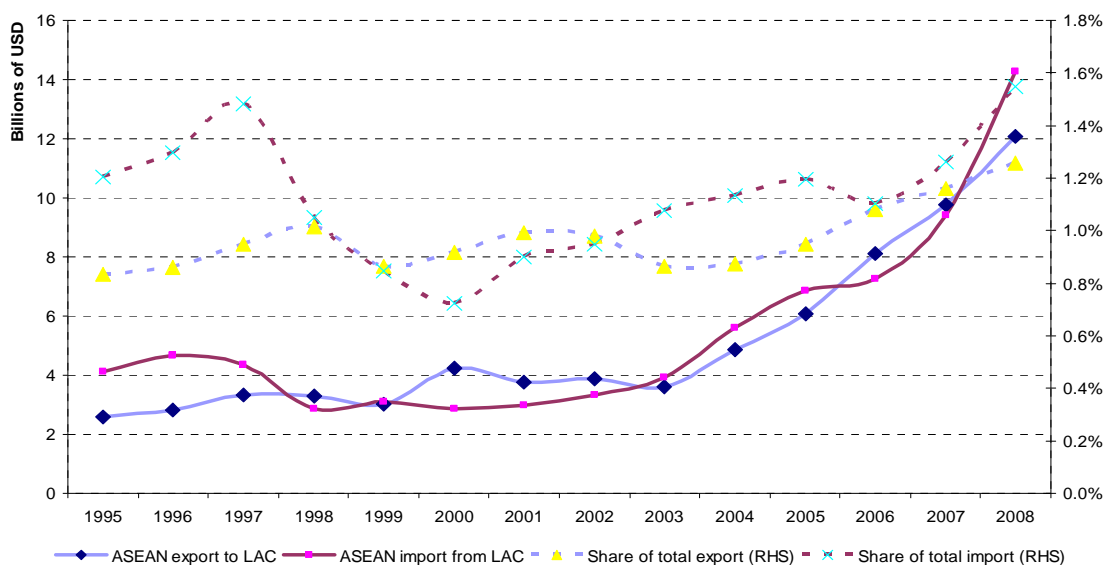


Source:

Calculated by authors based on data from COMTRADE, downloaded using WITS

Figure 4 shows that since 2004 ASEAN’s exports to LAC grew faster than ASEAN’s total exports. ASEAN’s imports from LAC increased from about USD4 billion in 1995 to more than USD14 billion in 2008. Although 2008 marks the highest value of ASEAN imports from Latin America, it only accounts for 1.6 per cent of total ASEAN imports. Similarly, exports to LAC more than tripled from USD2.6 billion in 1995 to USD12 billion in 2008, amounting to 1.4 per cent of total exports. Except for the period from 2000-2002, ASEAN had a trade deficit with LAC.

Figure 4. ASEAN trade with LAC and the world

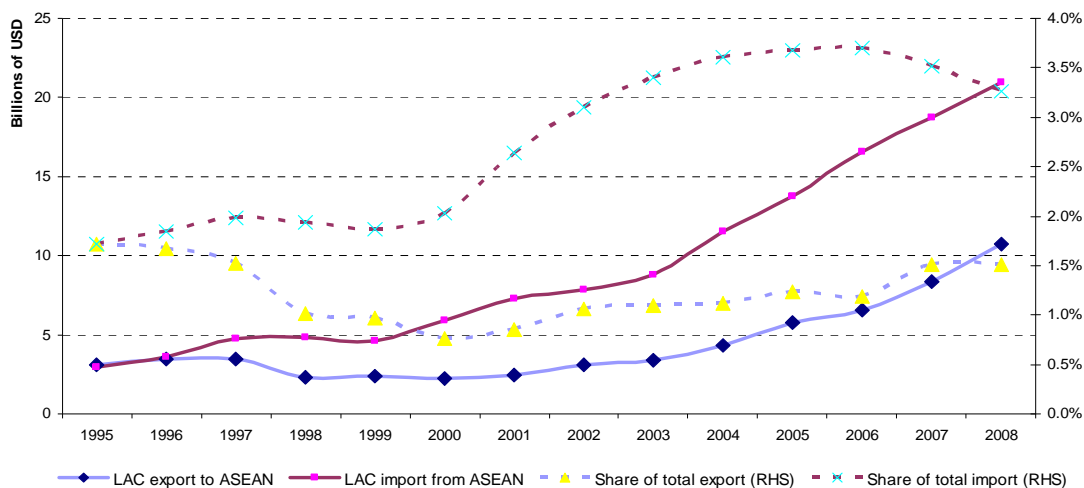


Source: Calculated by authors based on data from COMTRADE, downloaded using WITS. Reporter: ASEAN

The bilateral trade looks slightly different when considering the LAC perspective, as illustrated in Figure 5. According to the available statistical data, LAC reported a trade deficit with ASEAN throughout the period, while ASEAN reported the same period as an overlapping trade surplus and trade deficit (as shown in figure 4).

Bilateral trade between ASEAN and LAC is increasing in terms of absolute values but still constitutes a relatively small, albeit slowly increasing, share of each groupings total trade, which reached 3.3 per cent in the case of ASEAN and 1.5 per cent in terms of LAC in 2008. This is also shown in figures 4 and 5.

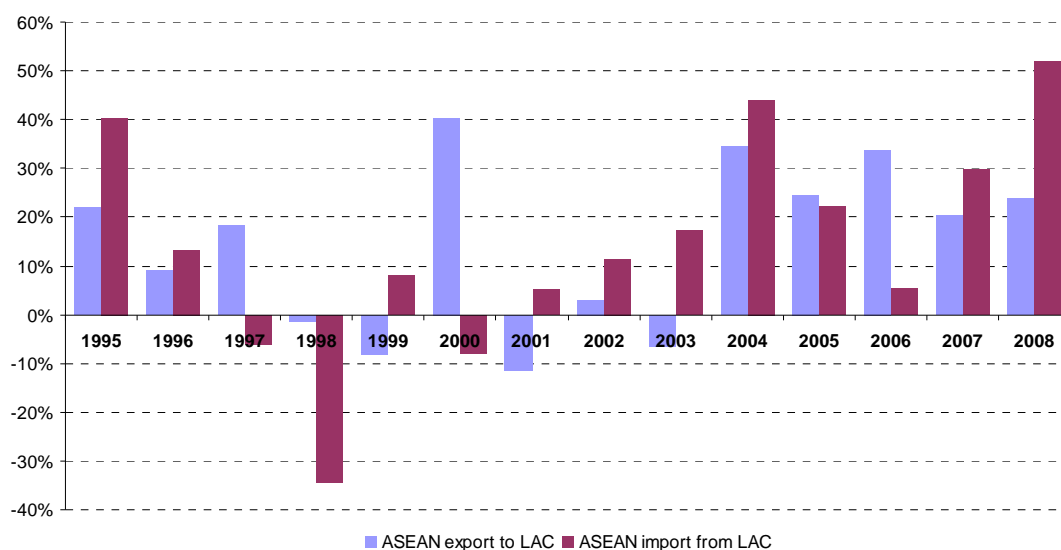
Figure 5. LAC trade with ASEAN and the world



Source: calculated by authors based on data from COMTRADE, downloaded using WITS. Reporter: LAC

Figure 6 depicts that ASEAN’s exports to and imports from LAC reflect a mild upward trend despite being quite erratic when looking at the year-to-year changes. During the Asian financial crisis in 1997/1998, both ASEAN’s exports and imports dropped. In the period after that, exports continued to post positive annual growth rates, with a temporary dip in 2005/2006, while imports from LAC showed less stable growth.

Figure 6. Trends in trade: annual change in interregional exports and imports



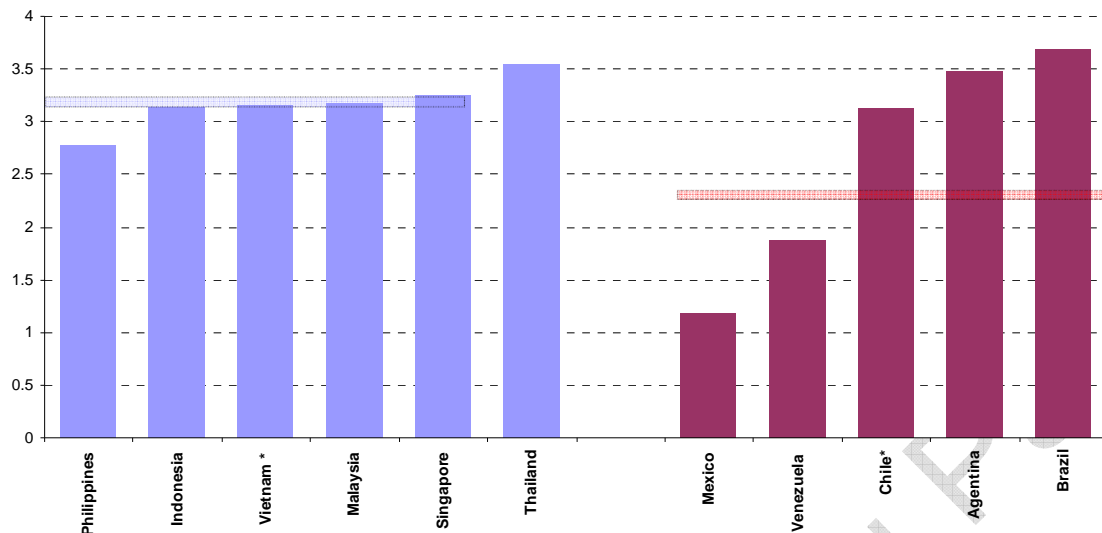
Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

2.1 Trade entropy

It has been hypothesized that one of the contributing factors to the great impact that the most recent economic crisis has had on the trade of some developing economies, is their high dependence on specific developed country markets (i.e. USA and the EU). The Trade Entropy Index measures the spread of exports over the markets to which a country exports and can be a useful indicator to show a relatively higher dependency on some markets. The index for ASEAN and LAC is presented in Figure 7. The higher values in this index show greater uniformity of the geographical dispersion of exports.⁵ In 2008, the weighted average of trade entropy indices for ASEAN countries was 3.24, and for Latin America 2.38. This means that on average ASEAN exports are more uniformly dispersed over its export markets than LAC. None of the economies of ASEAN had values lower than 2.5, whereas Mexico and Venezuela had index values below 2. This reflects the greater importance of a few markets for LAC exports, e.g. in the case of Mexico. Mexico has close trading ties with North America (*ceteris paribus*), therefore making its merchandise exports more vulnerable to any economic crisis in North America than in any of the featured ASEAN economies.

⁵ Detailed mathematical calculations are provided in the Technical Appendix.

Figure 7. Trade entropy of the selected ASEAN and LAC countries in 2008



Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

* Indicates that 2007 data was used

2.2 Geographical structure of ASEAN-LAC trade

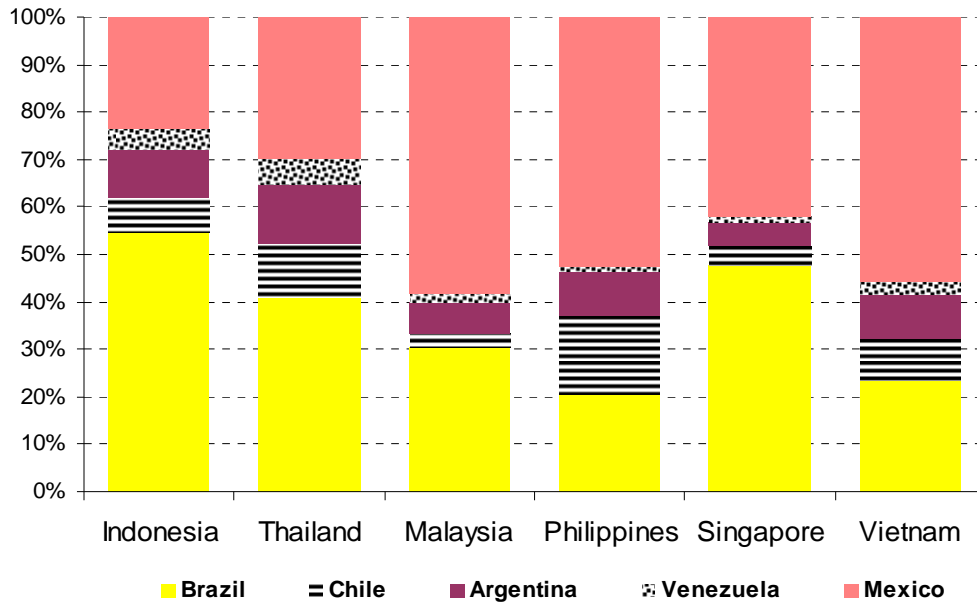
Figure 8 shows a geographical break-down of the bilateral trade between ASEAN and LAC in 2008. About 75 per cent of the exports to LAC from ASEAN was destined to three larger economies: Mexico, Brazil and Argentina.

The regional concentration of the individual ASEAN economies' exports to LAC varies a lot. For example, 58 per cent of Malaysian export to LAC is absorbed by Mexico. Similarly, more than 50 per cent of the Vietnamese and Philippines exports were destined to Mexico. On the other hand, Brazil was the top export destination for Indonesia and Singapore, absorbing 55 per cent of Indonesian and 48 per cent of the Singaporean exports.

Imports of ASEAN from LAC follow a similar pattern, with the large economies dominating the trade flows (see Figure 9). The main source of ASEAN imports from LAC in 2008 was Brazil followed by Argentina and Chile. Mexico, the top export destination, does not feature as a significant source of imports for ASEAN. Thailand shows the highest concentration of imports from the LAC region, where about 65 per cent of the LAC imports originated in Brazil.

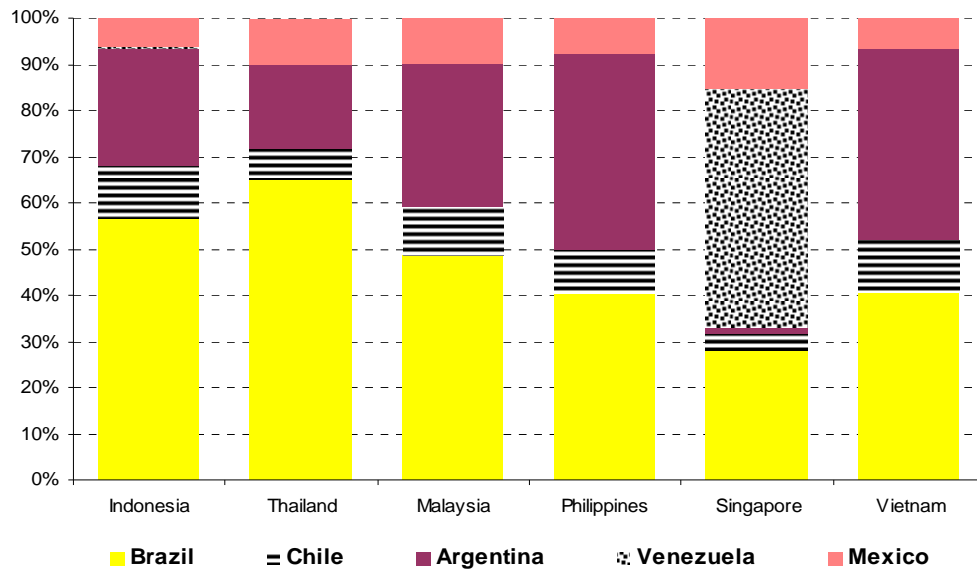
This import structure is similar throughout the ASEAN countries, except for Singapore where more than 50 per cent of the LAC imports originate in Venezuela. Likewise, Venezuela's trade with ASEAN, apart from trade with Singapore, is minimal.

Figure 8. Geographical break-down of ASEAN exports to LAC in 2008



Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

Figure 9. Geographical break-down of ASEAN import from LAC in 2008



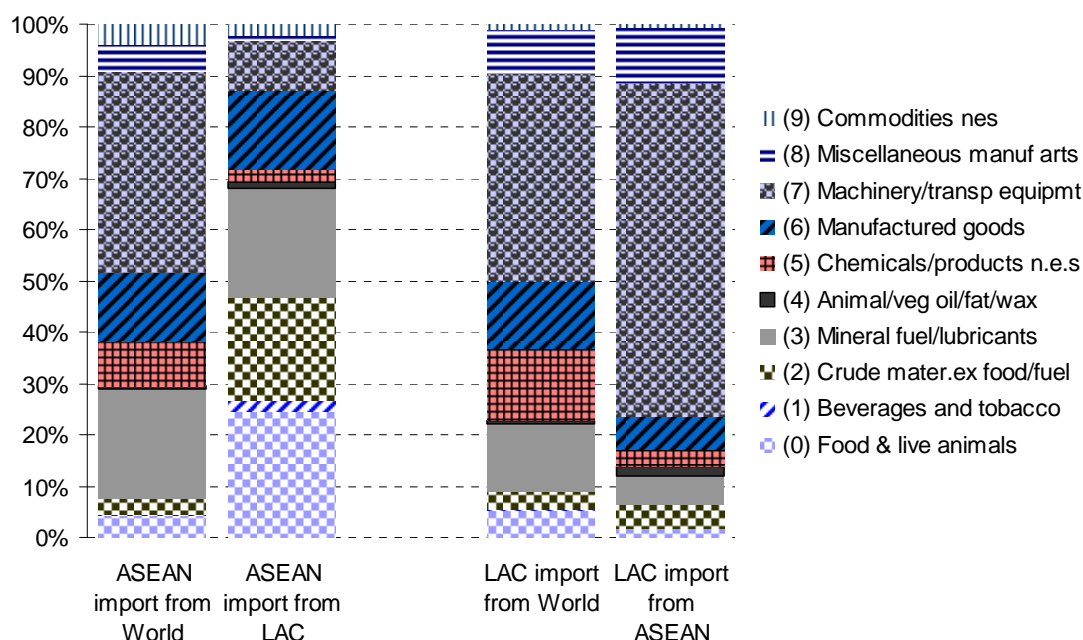
Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

2.3 Sectoral composition of trade

Figure 10 compares a sectoral composition of imports for ASEAN and LAC from the world and each other. It is obvious that both ASEAN and LAC trade very different baskets of goods with each other than from what they import from the world. ASEAN’s imports from the world are much more concentrated with products from SITC sections 7, 3, 6 and 5 absorbing 83 per cent of total imports, while these product categories capture only 48 per cent of ASEAN imports from LAC. The largest difference is in machinery and transport equipment (section 7), which is represented more in ASEAN’s total imports. In contrast, ASEAN imports relatively more food and live animals (section 0) from LAC than from the rest of the world.

Sections 7, 6, 5 and 3 are the largest components for LAC’s import basket from the world, together amounting to 81 per cent. The traded basket with ASEAN shows a higher concentration in section 7 which accounts for 65 per cent, while section 5 and 6 are smaller. The greatest similarity is found in section 8 (other manufactures) which accounts for about 10 per cent in both import baskets.

Figure 10. Sectoral composition of imports of ASEAN and LAC in 2008



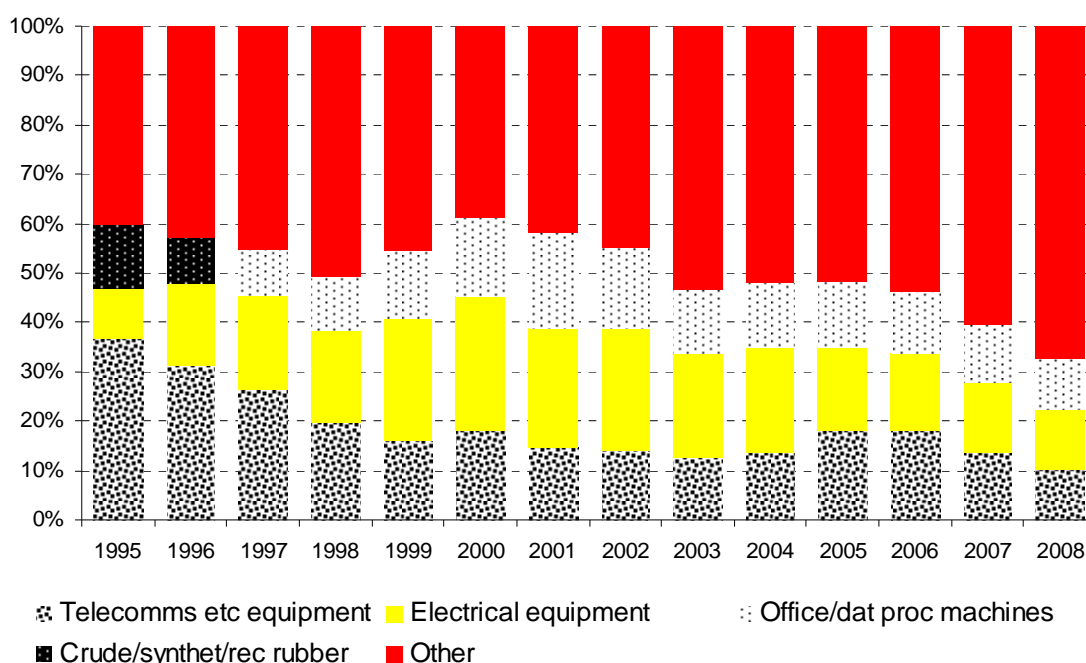
Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

Next, disaggregated data for exports and imports at the two digit SITC classification level are used. Four major commodity groups have been found dominating ASEAN’s exports to LAC since 1995: Telecommunication equipment (76), Electrical equipment (77), Office machinery (75) and Rubber in different forms (23).

Figure 11 shows the commodity concentration of ASEAN exports to LAC countries over the period from 1995 - 2008. The share of telecommunication equipment products have decreased steadily during the period, from about 35 per cent in 1995 to only 10 per cent in 2008. This drop in shares of telecommunication equipment occurred despite its dollar value of exports increasing from USD 0.9 billion to US 1.2 billion over the same period. However, total exports grew much faster, causing the share of telecommunications to be squeezed in.

During this observed period, ASEAN succeeded in increasing its export diversification which is captured in Figure 11. Starting from 2000, a trend of increasing shares for the residual commodity group “Other” is obvious.⁶ Together with an increase in total exports to LAC, the structure of that export has changed in favor of a more diversified composition.

Figure 11. Three largest sectors in exports from ASEAN to LAC (1995-2008, SITC 3 two-digit level)



Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

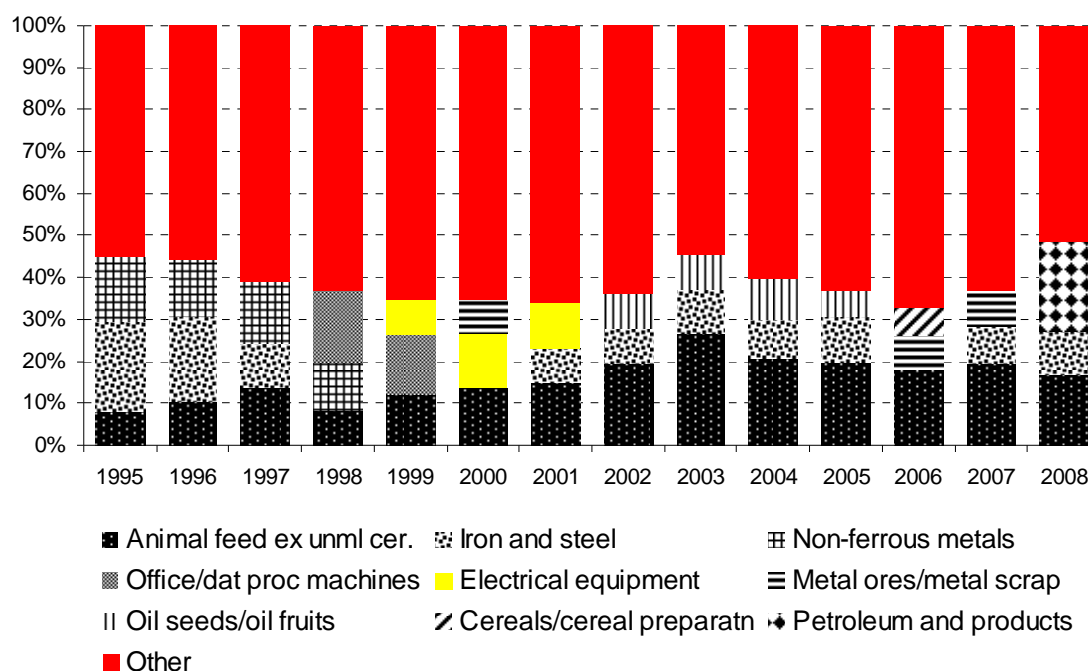
The composition of ASEAN’s imports from LAC in the same period shows a greater mix of commodities (see Figure 12). The top three imported commodity groups are different from year to year; however the group Animal feed (08) was part of the group of the top three imports every year. Imports of Iron and steel (67) are also high during the period but do not qualify as a top three categories in the period from 1998 to 2000 or in 2006.

The top three imported categories vary in their contribution to total imports during the period. About 30 per cent of total imports in 1999 were attributed to the top three categories, compared to 45 per cent in 2008. Consequently, the share of imports labeled as “Other” also varies⁷

⁶ Commodity group Other is mainly consisted of products in SITC category 2 (Crude materials) and 7 (Machinery and transport equipment)

⁷ Commodity group Other in ASEAN imports from LAC mainly consisted of products in SITC category 2, 7 and 0 (Food and live animals).

Figure 12. Three largest sectors in ASEAN imports from LAC (1995-2008, SITC 3 two-digit level)



Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

Most LAC imports from ASEAN are in finished goods (high-tech manufactures such as telecommunication equipment and various engine parts) thus featuring inter-industry trade in which LAC exports primary products, in return for importing more sophisticated manufactured products. The next section looks into the existence and development of intra-industry trade (IIT) between regions.

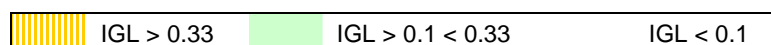
2.4 Intra-industry trade and complementarity index

Trade literature identifies several benefits from so-called intra-industry trade (IIT) which is most simply defined as the simultaneous export and import of the same product categories, particularly in manufactures. A high share of IIT is typically found in more developed countries with a high(er) share of manufactures in their total trade (and production). This is due to many reasons, the most obvious ones include the readiness of these countries to cut tariffs and other trade barriers on such products, and also they have production technology and other resources available to allow for the fragmentation of production in the industrial sector which is linked with a rise in IIT. The literature also argues that higher IIT indicates a better potential for an increase in future trade. Low shares of IIT are typically found in countries that have more concentrated production and trade driven by traditionally defined comparative advantages. However, an important reason for a low IIT might be the geographical distance because transport costs can prevent the development of production fragmentation which is associated with a higher share of IIT.

Table 2 shows the level of IIT between some of the selected economies in the two regions. In principle, IIT is very low but there are some cases where pairs of countries IIT account for a reasonable proportion of bilateral trade. The highest index is in bilateral trade between Mexico and Singapore, followed by trade between Mexico and Thailand. For these cases, between 37 per cent and 56 per cent of trade is of the IIT type. This is mostly driven by the production of components and parts for the vehicle and office equipment industries in these three countries.

Table 2. Intra-industry trade for Latin American Countries with ASEAN, 2006 (Grubel- Lloyd Indices)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Argentina	0.02	0.01	0.00	0.13	0.02	0.01
Brazil	0.05	0.02	0.02	0.18	0.05	0.06
Chile	0.00	0.01	0.03	0.02	0.01	0.00
Mexico	0.09	0.24	0.11	0.56	0.37	0.02
Venezuela	0.01	0.03	0.00	0.00	0.02	0.00

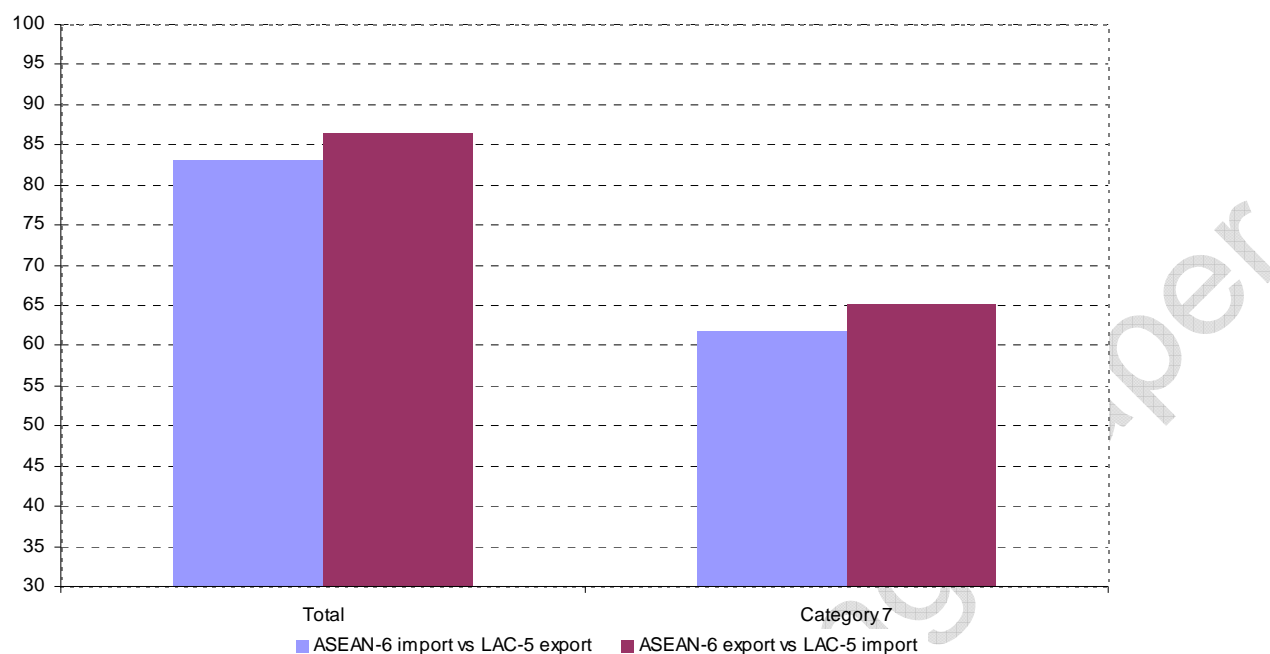


Source: Economic Commission for Latin America and the Caribbean (ECLAC) 2008

Another useful indicator of trade potential is the Complementarity Index which measures a degree to which the export pattern of one country (or group of countries) matches the import pattern of another. Figure 13 presents the indices for ASEAN as 86.52 and for LAC as 83.04. Both indices are relatively high, but they indicate that ASEAN’s exports cater to the Latin American market better than the other way round. This may contribute to the explanation for the consistent trade surplus in favour of ASEAN from 1998-2008 that was mentioned earlier.

In Table 3, ASEAN exports show their clear advantage in category 77, whereas Latin America has strong import demand for both Category 77 and Category 78. The Complementarity Index for ASEAN exports and LAC imports are lower within Category 7 (65.14 for ASEAN exports and 61.89 for LAC’s) than with overall trade, although the index has improved compared to 2007 (tables provided in appendix as table 1A and 2A).

Figure 13. Complementarity index of trade between ASEAN and LAC



Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

Table 3: Composition of overall trade flows between ASEAN and LAC within Machinery and transport equipment category in 2008

<i>SITC 7</i>	EX_{ASEAN}^*	IM_{LAC}	EX_{LAC}	IM_{ASEAN}
Power Generating Machines (71)	0.033	0.081	0.073	0.060
Special. Industrial Machinery (72)	0.04	0.080	0.039	0.077
Metal Working Machinery (73)	0.01	0.020	0.003	0.016
General Industrial Machinery n.e.s (74)	0.06	0.134	0.083	0.094
Office Machines, Adp Mach (75)	0.24	0.078	0.052	0.130
Telecomm Sound Equip etc (76)	0.11	0.159	0.227	0.093
Elect Mach Appar, Parts, n.e.s (77)	0.41	0.209	0.164	0.396
Road Vehicles (78)	0.08	0.216	0.306	0.072
Other Transport Equipment (79)	0.03	0.026	0.053	0.062
Category 7	1.00	1.000	1.000	1.000
Complementarity index (%)		65.14		61.89

* ASEAN exports of Subcategory 1/ total ASEAN exports of Category 7

Note: EX stands for export and IM stands for import.

Source: Calculated by authors based on data from COMTRADE, downloaded using WITS

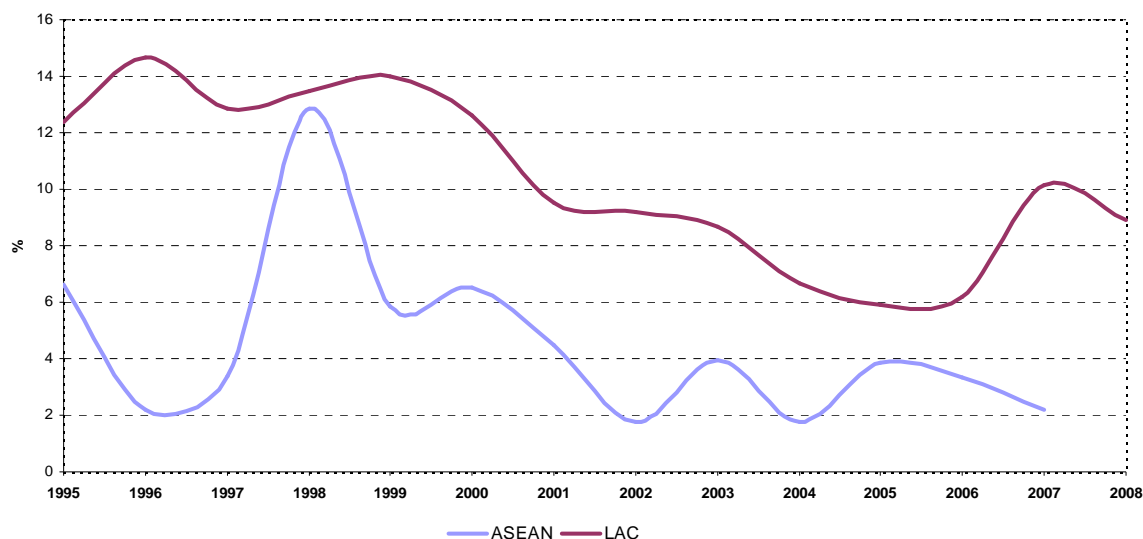
III. Obstacles in trade between ASEAN and LAC

3.1 Tariffs and trade costs in trade between ASEAN and LAC

As pictured in Figure 14, applied tariffs on traded goods have decreased in the observed period. In 1995, the average effectively applied tariff rate on ASEAN imports was 12.4 per cent and 6.4 per cent on LAC imports. The latest data shows that these levels have dropped to 8.9 and 2.2 per cent, respectively.

However, a large increase in tariffs on imports of LAC's goods occurred in 1998 and it corresponds to a sharp drop in imports at that time (34 per cent). This once-off sharp increase in ASEAN's tariffs is consistent with other observations on reduced openness to trade during the Asian financial crisis. Similarly, in LAC there was a relatively significant increase in effectively applied tariffs on ASEAN goods in 2007, but it seems that it did not result in a reduction in imports from ASEAN.

Figure 14. Effectively Applied Tariff Rates from 1995-2008* (weighted average)



Source: Calculated by authors based on data from UNCTAD TRAINS, downloaded using WITS

* 2008 data for ASEAN is not available

Box 1 which illustrates a case study on the developments in import tariffs imposed on ASEAN goods in Argentina and Brazil, provides further details that are useful to understanding the role of tariff barriers in trade between ASEAN and LAC.

Box 1. Role of tariff protection on imports of Argentina and Brazil from ASEAN

Figures 15 to 20 shows Argentina and Brazil's three largest imports from ASEAN and the imposed tariffs in 1995, 2000 and 2007/08. The left axis shows the import value in millions of USD and the right axis shows the imposed tariffs. The share of imports from ASEAN's source in total imports is given by numbers in brackets (in the bars in each figure) while the level of the imposed tariff is reflected by the dots. For example, Figure 15 shows that the import of natural rubber from Indonesia in 1995 accounted for 31 per cent of Argentina's total imports of rubber in that year and the applied tariff was 4 per cent.⁸ By tracking the imports

⁸ Argentina and Brazil were chosen as reporters and the products were the three most imported from ASEAN in 2007/2008 on a country-to-country basis. The applied tariffs were retrieved from TRAINS database by using WITS.

and tariff levels over time, one could observe if there is any correlation between the reduction in tariff levels and changes in imports of a specific product.

Figure 15

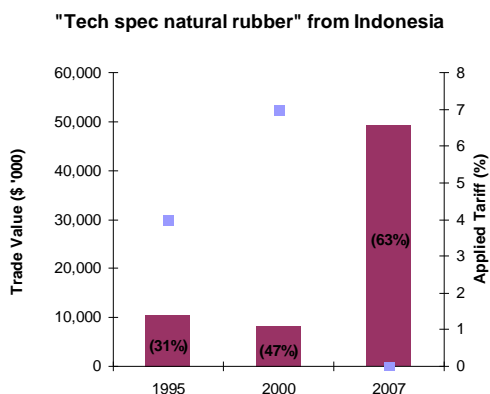


Figure 16

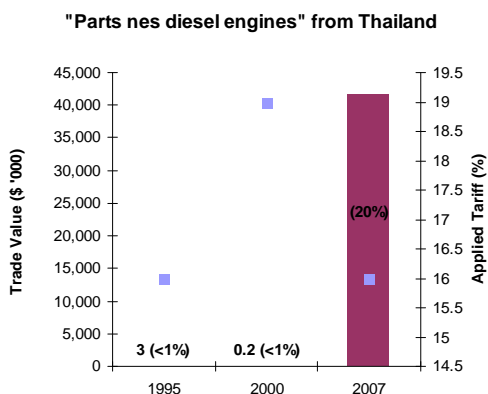
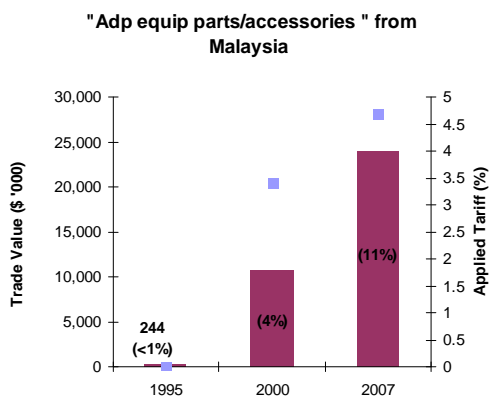


Figure 17



It appears from Figure 15 that imports of natural rubber and tariffs imposed on natural rubber follow as expected an inverse relationship. In other words, lowering of tariffs corresponds to a rise in imports (likewise, an increase in tariffs is associated with a drop in imports). Furthermore, it seems that imports of rubber increased more than total imports, as its share rose from 47 per cent in 2000 to 63 per cent in 2007. The same correlation between tariff and import changes are recorded for diesel engines in Figure 16; tariffs on diesel engines were reduced from 19 per cent in 2000 to 16 per cent in 2007. Argentina's import of diesel engines from Thailand was minimal in 2000, but in 2007 it accounted for almost 20 per cent of total diesel engine imports.

In contrast to the previous two cases, Figure 17 shows the relationship between tariffs and the third largest imported product, under the name Adaptive equipment which is not inversely correlated. In this case, imports from Malaysia have increased despite higher tariffs being imposed.

Similar to the case in Argentina, Brazilian imports of natural rubber from Indonesia increased over time as the tariffs were reduced. By 2008, 38 per cent of Brazil's imports of natural rubber originated in Indonesia, amounting to an import value of almost USD 180 million. Imports of natural rubber from Thailand also significantly increased in 2008 compared to previous years. Brazil's tariff policy on rubber toward Thailand is not identical to the one on Indonesian rubber, but it seems that similar changes for rubber imports occurred.

Figure 18

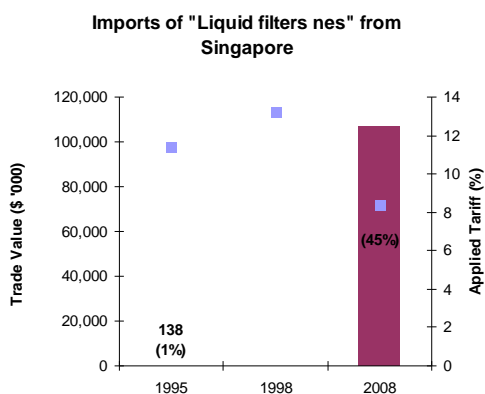


Figure 19

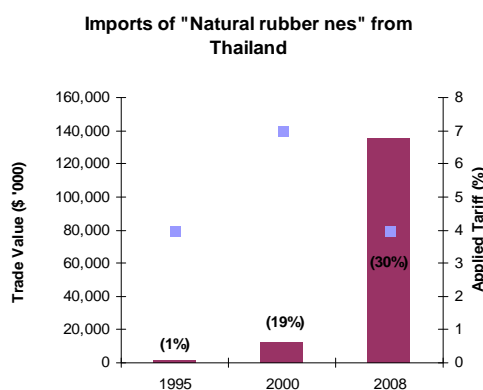
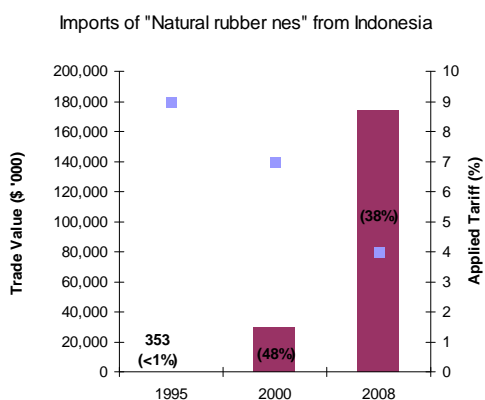


Figure 20



Imports of liquid filters for industrial use from Singapore amounted to more than USD 100 million in 2008, which accounts to 45 per cent of Brazilian liquid filters imports. Small or no imports occurred in 1995 and 1998 when tariffs were also higher.⁹

In summary, these cases illustrate that lower tariffs, in principle, are followed by higher imports. However, no rigorous econometric testing was undertaken to prove that an increase in import value was caused by a reduction in tariffs. Nevertheless, one could argue that the reduction in tariffs would continue to enable the further increase of trade if the current level is deemed to be a significant obstacle. From the observed evidence on the effectively applied tariffs on trade between ASEAN and LAC, it appears that tariffs are not the worst obstacle in their trade.

3.2 Role of non-tariff measures and other trade costs

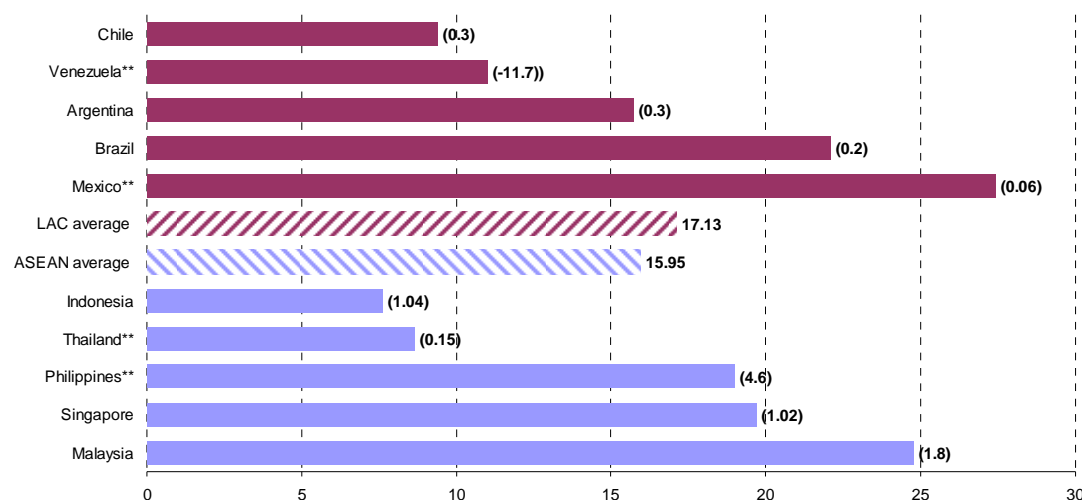
While Box 1 shows an inverse relationship between tariff and import values in most observed cases, no direct one-on-one causation between tariff reductions and increased trade values were demonstrated. Even though the case studies were limited to two countries along with three products and therefore constitutes only

⁹ Due to lack of 2000 data, 1998 data was used in this calculation.

anecdotal evidence, it is argued that the tariffs are not the best explanatory variable for the current state of trade between ASEAN and LAC. These other factors relate to non-tariff measures and other costs related to trade included in both transport and trade facilitation. To analyze the role of these factors, two indicators from the World Bank’s World Trade Indicators database were chosen, these include: the Overall Trade Restrictiveness Index (OTRI) and the Logistic Performance Index (LPI).

OTRI is expressed as an equivalent tariff rate but it is derived from a country’s tariffs (as in the schedule) and non-tariff measures (NTMs).¹⁰ It equals the uniform tariff rate that (if applied) would keep import levels unchanged. Thus, OTRI captures the impact of other barriers to trade over and above the impact on tariffs.¹¹

Figure 21. Overall Trade Restrictiveness Index for ASEAN* and LAC (2007)



* Data for Viet Nam not available

** Indicates that 2006 values were used

Values in brackets show the change from previous year.

Source: The World Bank, World Trade Indicators 2009/10

Figure 21 shows that ASEAN countries on average score lower OTRI values than LAC but the variations within the groupings are large. Mexico’s score is three times higher than Chile’s, and the gap between Malaysia and Indonesia is even larger. But the relative distance between the countries within the groupings are similar: the standard deviation is close to 7.5 units in both regions.

The largest change occurred in Venezuela which lowered its score by 11.7. Besides Venezuela, the Latin American countries’ scores are close to previous years. The movements in ASEAN are larger and the greatest change occurred in Philippines which increased by 4.6 units.

The average score in ASEAN is 17.13 units and in LAC 15.95 units. These numbers are naturally larger than the weighted average tariffs presented in Figure 13 because of the NTMs. But the difference between

¹⁰ Not all non-tariff measures are in fact working as trade barriers. On conceptualization and measurement see more in Mikic and Wermelinger, eds. (2010).

¹¹ See the WTI User Guide for a complete description on the LPI and OTRI. Available at: <http://info.worldbank.org/etools/wti/docs/userguide.pdf>

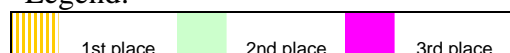
OTRI and the weighted average tariff is 7 in LAC and 14 in ASEAN. Thus, there are indications that NTMs are contributing to a higher extent in AESAN’s overall restrictiveness.

The LPI reflects the country’s logistic environment and the index ranges from 1 to 5, in which a higher score represents a better performance based on six key criteria. The measurement includes aspects such as ease of arranging competitively priced shipments (International shipments) and quality of trade related infrastructure (Infrastructure). In Table 4, each individual country’s LPI is presented and derived into the six key dimensions. Figure 22 illustrates the countries LPI scores graphically.

Table 4. Logistic Performance Index in ASEAN and LAC (2009)

	Singapore	Malaysia	Thailand	Brazil	Philippines	Argentina	Chile	Mexico	Vietnam	Indonesia	Venezuela
LPI	4.09	3.44	3.29	3.2	3.14	3.1	3.09	3.05	2.96	2.76	2.68
Customs	4.02	3.11	2.67	3.02	2.63	2.06	2.68	2.37	2.55	2.43	2.93
Infrastructure	4.22	3.5	2.57	3.16	2.75	2.44	2.56	3.1	2.95	2.54	2.86
International shipments	3.86	3.5	3.4	3.27	3.15	3.05	3.04	2.91	2.83	2.82	2.74
Logistics competence	4.12	3.34	2.95	3.16	3.03	2.53	2.89	3.3	3.04	2.47	0.46
Tracking & tracing	4.15	3.32	3.29	3.41	3.15	2.84	3.1	3.42	3.28	2.77	3.33
Timeliness	4.23	3.86	3.83	3.73	3.82	3.05	3.44	4.14	3.66	3.46	3.8

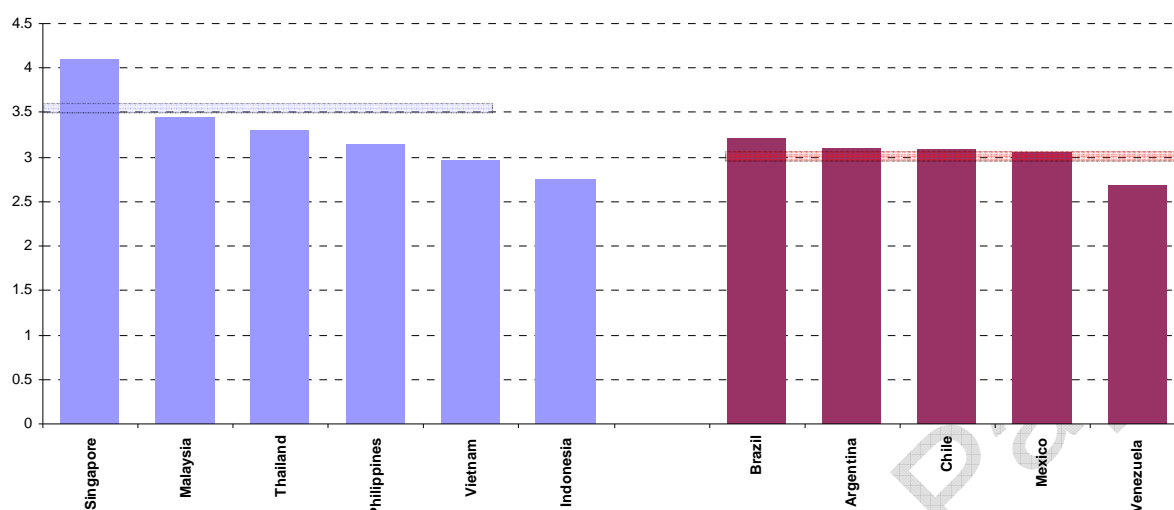
Legend:



Source: Extracted from World Bank, 2009

The countries with the highest LPI ranking are found in ASEAN. Singapore, Malaysia and Thailand are consequently driving the ASEAN trade weighted average score (3.52) above LAC’s (3.06). But the change compared to 2007 is positive for LAC (0.2) and negative for ASEAN (-0.05). Because of Singapore’s substantial overall trade, the weighted average gets slightly distorted in ASEAN but both regions show a positive change in the simple average.

Figure 22. Logistic Performance Index for selected countries (2009)



Note: The trade weighted averages are indicated by the horizontal bars.

Source: The World Bank, World Development Indicators 2009

Singapore is consistently ranked as the highest performer with a score over 4 in all dimensions of LPI. The lowest scores among ASEAN members are registered for Viet Nam and Indonesia; both have values less than 3. Brazil and Argentina received the highest ranking in LAC and Brazil reached third best value in Customs and Logistic Competence.

The findings show that the Latin American countries are less capable to facilitate trade and a trade expansion at the moment despite the fact that Singapore’s high score and share in trade is causing an upward bias for the ASEAN.

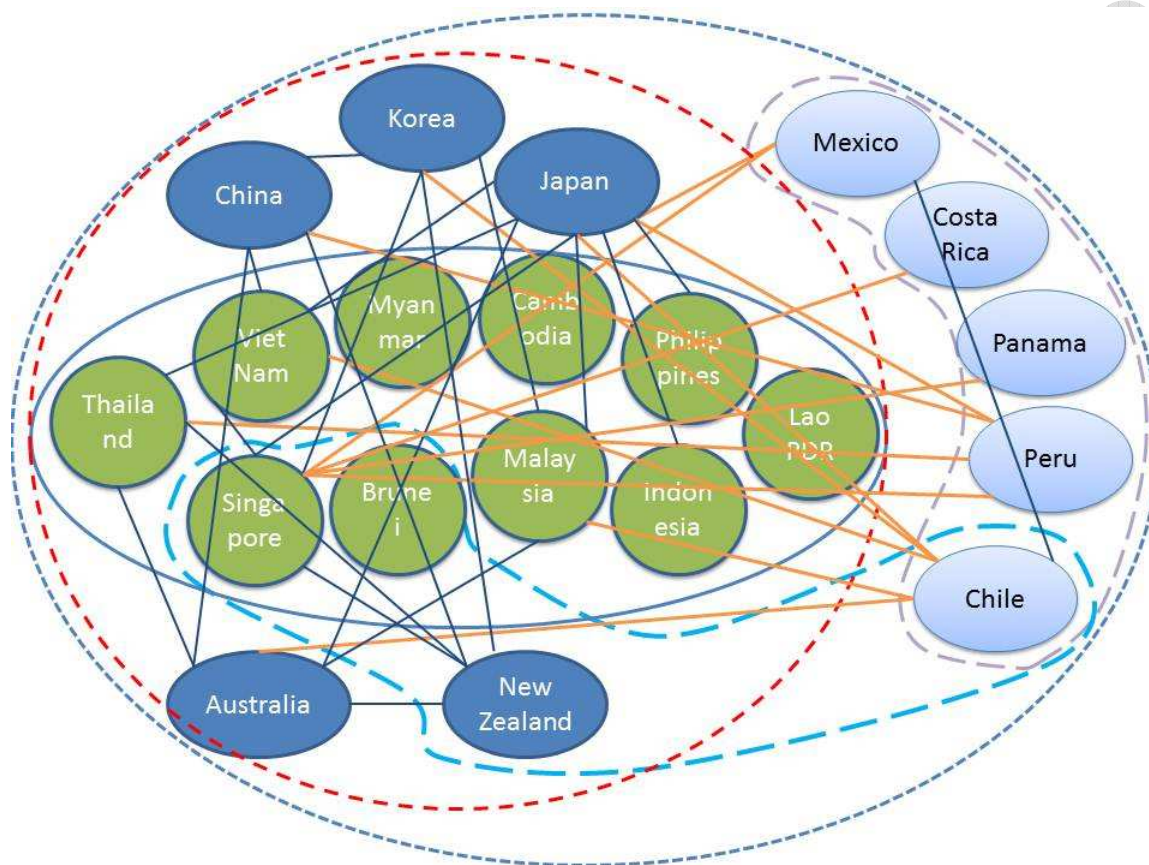
IV. Existing cross-South Pacific trade agreements and issues of ‘noodle bowl’

There is a rich body of literature on the rise of regionalism since the establishment of the World Trade Organization (WTO) in 1995 (for a more recent review from the Asia-Pacific perspective see ESCAP, 2009). ASEAN and LAC have each contributed to the proliferation of a number of various preferential trade agreements (PTAs). Members of these two groupings are party to numerous bilateral and plurilateral PTAs (see the Table 5A in Statistical appendix), covering not only trade in goods and services, but also investment, IPR, and other areas. However, there is only a few agreements between the countries belonging to ASEAN and LAC as defined in this paper. At present, the only PTAs that are currently in force among the countries tracked in this paper are Panama-Singapore (2006), Peru-Singapore (2009), Singapore-Costa Rica (2010)¹² and the Trans-Pacific Strategic Economic Partnership-P4 (2006, Brunei Darussalam, Chile, New Zealand and Singapore). All these agreements cover both goods and services and are notified to the WTO under GATT Art. XXIV and GATS Art. V. The countries with the largest number of PTAs in force, Chile (18) and Singapore (19), surprisingly still do not have a mutual PTA.

¹² Third protocol on early harvest between Peru-Thailand was signed on 18 November 2010 with an intention to start implementation in first quarter of 2011.

If ASEAN’s dialogue partners are included (China, Japan, Republic of Korea, Australia, New Zealand and India), then the number of agreements in existence between ASEAN+6 countries and LAC is much larger, as there are bilateral agreements between Chile and Australia, China, India, Japan, and the Republic of Korea; between Mexico and Japan, and the Republic of Korea; Peru and China, MERCOSUR and India. Not to be forgotten are the agreements within each of the two groupings (LAC and ASEAN). All these are plotted in Figure 23 which illustrates the phenomenon of “noodle bowl” with respect to a number of agreements based on ASEAN’s wider coverage.¹³

Figure 23. Cross-Pacific “noodle bowl”



How much trade is covered by these agreements?¹⁴ Table 5 presents the trade weighted averages for ASEAN and the three plurilateral agreements among the LACs (based on data available in the World Trade Indicators from the World Bank). On average ASEAN members have more than 15 PTAs, compared to 6 for a member of the Andean group or 4.7 for a MERCOSUR member. Through these agreements, no more than 60 per cent of trade is covered for ASEAN members, while this coverage is much less for the Andean Group (around 40 per cent), MERCOSUR (about 29 per cent) and for CARICOM whose coverage of exports is over 40 per cent while its imports drop to just over 25 per cent (calculations from the period 2006-2009 or latest

¹³ Even more dense ‘noodle bowl’ is added to the Statistical appendix as Figure 1A..

¹⁴ Trade coverage through PTAs is not to be confused with the utilization rate of PTAs which is a reflection of the actual use of preferential treatment under each PTA and is not easy to calculate, Intra-ASEAN trade estimates run at around a 25-30 per cent utilization rate.

year available). As expected, these averages mask wide variations among the individual countries-members of these PTAs (see Statistical appendix for more details), but rarely the level of exports and imports covered by partners in the PTAs reach over 80 per cent (e.g. Brunei Darussalam), while often it remains in the low 20s.

Table 5. How much trade is covered through PTAs?

	No of FTA/CU	Trade coverage	
		Exports(%)	Imports(%)
ASEAN trade weighted average	15.24	58.37	60.93
Andean Group trade weighted average	6.04	41.09	44.49
MERCOSUR trade weighted average	4.70	29.95	28.48
CARICOM trade weighted average	4.28	42.69	25.65

Source: World Trade Indicators 2010-2011, World Bank

The reasons for opting to pursue trade liberalization through a preferential rather than an MFN path vary from country to country. Often, the slow progress of MFN-based trade talks in the Doha Round is cited as one of the most important drivers for the rise in PTA numbers. This is of course valid in the case of countries that are eager to trade in a barrier-free environment, such as Singapore or Chile. There are countries that are reluctant to provide freer access to their markets at the MFN level, but are still willing to do it in a more controlled and gradual process of regionalism, particularly in areas other than goods trading. Whatever the reason for the proliferation of PTAs, there are a number of potentially adverse effects:

- Instead of generating trade to integrate markets, the existence of the so-called “noodle bowl” can cause a rise in transaction costs for traders and investors who operate in these markets and thus may obstruct trade and reduce the unit benefits of existing trade.
- The existence of agreements in a hub-and-spoke configuration could lead to a situation where the compliance with rules of origin prevents sourcing from certain markets and therefore reduces their chances to develop value-added stages of production.
- Some countries may not be as attractive as parties in the PTAs and thus would face less market access than if the liberalization was pursued through as multilateral liberalization. This is particularly true for some smaller low-income developing countries.

In short, PTAs can turn into obstacles rather than being enablers of trade (Estevadeordal et al, 2009). This is particularly relevant at times when global demand for trade weakens, as was the case for 2008 and 2009. Trade can act as a countercyclical policy measure when external demand falls. However, if there are obstacles to trade that are associated with PTAs, it would be difficult to tap into that potential.

Thus countries in ASEAN and LAC who are looking at how to increase their mutual trade do not necessarily need to try to do it through formal preferential trade agreements, if signing new agreements would just add to the “noodle bowl” impact. Instead, they need to pursue policies of expanding mutual trade with an effort to work within the existing agreements and if new agreements are signed, they must contribute towards increased convergence/harmonization of the rules and agreements.

While there are still some highly effective tariffs among the observed countries, the analysis in this paper identifies non-tariff barriers and other ‘behind-the-border’ barriers as major obstacles in trade between ASEAN and LAC members. Therefore, an ‘ordinary’ PTA based on enabling-clause conditions, would not effectively eliminate real obstacles to trade. This is because a portion of the higher cost of trading between these two groupings arises from large geographical distance, even the

most sophisticated and advanced agreements will not be able to remove that natural obstacle. Notwithstanding that, there are many untapped areas of collaboration which can be further developed by making sure that the most obvious trade barriers, such as tariffs, tariff-rate quotas and other QRs are eliminated. With an increased volume of trade, there will also be some positive externalities arising from better knowledge of the markets and their demands, and lower costs of trading that can reinforce production specialization benefiting both sides.

V. Conclusions

ASEAN countries have learned an important lesson in the aftermath of the Asian financial crisis, specifically when regional cooperation is working towards enabling trade it could act as a countercyclical policy. Therefore when the latest global economic crisis hit the region, and countries in this region lost their important exporting markets, an increase of trade within the region was equally as important as the introduction of packages to stimulate domestic demand. Moreover, in contrast to the situation in the late 1990s, the developing countries globally were experiencing a lesser fall in their GDPs opening potential for more intensive South-South trade and investment. In fact, Latin American economies on average have been posting admirable growth rates, for example Peru's growth rate projections show an increase from 2.95 per cent in 2000 to 8.2 per cent in 2010, while Panama is projected to increase from 2.7 per cent in 2000 to 6.2 per cent in 2010 (International Monetary Fund, 2010). However, while this relatively vibrant growth may indicate potential for new trade, factors such as lack of knowledge of each other's markets, lack of 'social capital' between the traders, no established financial channels and guarantees, geographical, linguistic, cultural and other distances, all played a role in limiting possibilities for expanding trade between ASEAN and LAC.

To increase trade between the ASEAN and LAC from the current low level, much more than "political will" is needed. As trade is done by firms, it is firms that need to recognize that there are positive returns from trade (and investment) across the south-Pacific. Obviously environments in which firms have to do business matter, as do barriers that exist on and behind the border. Governments of countries on both sides of the Pacific should share best practices on domestic reforms and supporting policies to create predictable and stable environments for firms operating in the production of goods and provision of services, irrespective of their national origins. This includes a cooperation and coordination between governments on introducing cross-regional standards on regulatory measures, quality control measures, and also the removal of border and behind-the-border barriers. Whether this is done on a reciprocal basis through a contractual arrangement (such as trade and other inter-governmental agreements) or in a less formal way (based on business association agreements), is a matter of decision and must be based on further impact analysis of such agreements. As established in the literature, high transport costs and weak logistics are undermining trade potential. This needs to be addressed through infrastructural investments but also through sharing of experiences - some of the best performers in logistics come from ASEAN. Most importantly, the gap in knowledge about each other's regions characteristics and needs should be closed by investing in more people-to-people contacts through university and professional exchanges, business trips, organization of business and cultural fairs, and through formalizing some joint projects co-funded by governments on both sides. Opportunities for beneficial cooperation between the two regions abound and they should not be left unused for much longer.

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Technical appendix

1. The formula of Trade Entropy for a single country:

$$\sum_d \left(\frac{X_{sd}}{X_{sw}} \right) \ln \left(\frac{1}{X_{sd}/X_{sw}} \right)$$

Where s is the source country under study, d is the set of destinations, w is the world, and X is the bilateral flow of exports from the source to the destination.

2. The formula of Complementarity for a region:

$$\left(1 - \left(\sum_i \left| \frac{m_{iwd}}{M_{wd}} - \frac{x_{isw}}{X_{sw}} \right| \right) \div 2 \right) \times 100$$

Where d is the importing region of interest, s is the exporting region of interest, w is the world, I is the set of industries, x is the commodity export flow, X is the total export flow, m the commodity of import flow and M the total import flow. Dividing by 2 converts this to a number between 0 and 1, with zero indicating that all shares matched and 1 indicating that none matched.

Statistical appendix

Table 1 A. Complementarity index of overall trade flow in ASEAN and LAC

<i>SITC</i>	EX_{ASEAN}	IM_{LAC}	abs-dif**	EX_{LAC}	IM_{ASEAN}	abs-dif**
<i>Category 0</i>	0.055*	0.053	0.0025	0.118	0.043	0.0749
<i>Category 1</i>	0.004	0.003	0.0018	0.012	0.004	0.0077
<i>Category 2</i>	0.037	0.034	0.0026	0.102	0.029	0.0731
<i>Category 3</i>	0.171	0.132	0.0383	0.217	0.214	0.0035
<i>Category 4</i>	0.037	0.005	0.0315	0.014	0.004	0.0103
<i>Category 5</i>	0.070	0.142	0.0720	0.048	0.088	0.0406
<i>Category 6</i>	0.089	0.131	0.0415	0.128	0.133	0.0052
<i>Category 7</i>	0.385	0.406	0.0213	0.291	0.393	0.1022
<i>Category 8</i>	0.095	0.086	0.0090	0.049	0.052	0.0037
<i>Category 9</i>	0.058	0.009	0.0491	0.021	0.039	0.0179
<i>All</i>	1.00	1.00		1.00	1.00	
Complementary%		86.52			83.04	

* ASEAN exports of Category 0/ total ASEAN exports

**absolute value of difference between export and import shares for its corresponding category

Category 0: Food and live animals

Category 1: Beverages and tobacco

Category 2: Crude materials, inedible, except fuels

Category 3: Mineral fuels, lubricants and related materials

Category 4: Animal and vegetable oils, fats and waxes

Category 5: Chemicals and related products, n.e.s.

Category 6: Manufactured goods classified chiefly by material

Category 7: Machinery and transport equipment

Category 8: Miscellaneous manufactured articles

Category 9: Commodities and transactions not classified elsewhere in the SITC

Source: COMTRADE, downloaded using WITS

Table 2A. Composition of overall trade flows between ASEAN and LAC within Machinery and transport equipment category - 2007

<i>SITC 3</i>	<i>EX</i> _{ASEAN}	<i>IM</i> _{LAC}	abs-dif**	<i>EX</i> _{LAC}	<i>IM</i> _{ASEAN}	abs-dif**
<i>Subcategory 71</i>	0.03*	0.076	0.0025	0.077	0.053	0.0234
<i>Subcategory 72</i>	0.03	0.079	0.048	0.038	0.068	0.0307
<i>Subcategory 73</i>	0.01	0.02	0.0146	0.003	0.014	0.0111
<i>Subcategory 74</i>	0.06	0.138	0.0829	0.082	0.078	0.0032
<i>Subcategory 75</i>	0.24	0.081	0.1562	0.064	0.134	0.0699
<i>Subcategory 76</i>	0.11	0.133	0.0224	0.199	0.09	0.1085
<i>Subcategory 77</i>	0.45	0.2	0.2509	0.17	0.455	0.2852
<i>Subcategory 78</i>	0.06	0.243	0.1844	0.321	0.054	0.267
<i>Subcategory 79</i>	0.02	0.029	0.0063	0.047	0.052	0.0052
<i>All</i>	1	1		1	1	
Complementary%	61.59			59.79		

* ASEAN exports of Subcategory 1/ total ASEAN exports of Category 7

**absolute value of difference between export and import shares for its corresponding category

Category 1: Power Generating Machines

Category 2: Special. Industrial Machinery

Category 3: Metal Working Machinery

Category 4: General Industrial Machinery n.e.s

Category 5: Office Machines, Adp Mach

Category 6: Telecomm Sound Equip etc

Category 7: Elect Mashinery Appar, Parts, n.e.s

Category 8: Road Vehicles

Category 9: Other Transport Equipment

Source: COMTRADE

Table 3 A. Weighted averages of Effectively Applied Tariff rates imposed on imports

<i>Reporter: ASEAN countries</i>						
	<i>IDN</i>	<i>MYS</i>	<i>PHL</i>	<i>SGP</i>	<i>THA</i>	<i>VNM</i>
<i>ARG</i>	2.38	1.09	5.21	0	10.03	10.07
<i>BRA</i>	2.57	2.64		0	8.71	6.89
<i>CHL</i>	0.42	0.33	3.26	0	3.02	4.94
<i>MEX</i>		3.25	1.15	0	4.69	5.99
<i>VEN</i>		2.2	3.12	0	11.14	22.42
<i>Average</i>	1.79	1.9	3.2	0.0	7.5	10.1

Source: UNCTAD TRAINS, retrieved by WITS

Table 4A. Weighted averages of Effectively Applied Tariff rates imposed on imports

<i>Reporter: Latin American Countries</i>						
	<i>IDN</i>	<i>MYS</i>	<i>PHL</i>	<i>SGP</i>	<i>THA</i>	<i>VNM</i>
<i>ARG</i>	10.56	9.56	10.39	8.8	13	13.12
<i>BRA</i>				10.94	13.36	
<i>CHL</i>	6	6	6	0.06	6	6
<i>MEX</i>				5.64	7.09	
<i>VEN</i>	17.02	17.97	14.19	14.26	16.44	24.22
<i>Average</i>	11.19	11.18	10.19	7.94	11.18	14.45

Source: UNCTAD TRAINS, retrieved by WITS

Table 5A. Regional and Plurilateral Preferential Trade Areas for selected Latin American economies, as of November 2007

Countries	Intra-regional PTAs	Extra-regional PTAs	Agreements	Countries
Argentina	Mercosur (3) + Andean Community (5) + Chile (1) = 9	Mercosur - European Union	4	9
Brazil	Mercosur (3) + Andean Community (5) + Chile (1) = 9	Mercosur - European Union	4	9
Chile	Mercosur (4) + Andean Community (5) + CACM (5) + Cuba (1) + Mexico (1) = 16	EU (25) + EFTA (4) + United States (1) + Canada (1) + Korea (1) + New Zealand (1), Singapore (1) + Brunei Darussalam (1) + China (1) + India (1) + Japan (1) = 38 Negotiating FTA with: Thailand, Malaysia and Australia	18	54
Mexico	NAFTA (3) + Costa Rica (1) + Nicaragua (1) + Chile (1) + Bolivia (1) + Uruguay (1) + Colombia (1) = 9	European Union (25) + EFTA (4) + NAFTA (2) + Israel (1) + Japan (1) = 33	12	42

Note: information on Venezuela not available

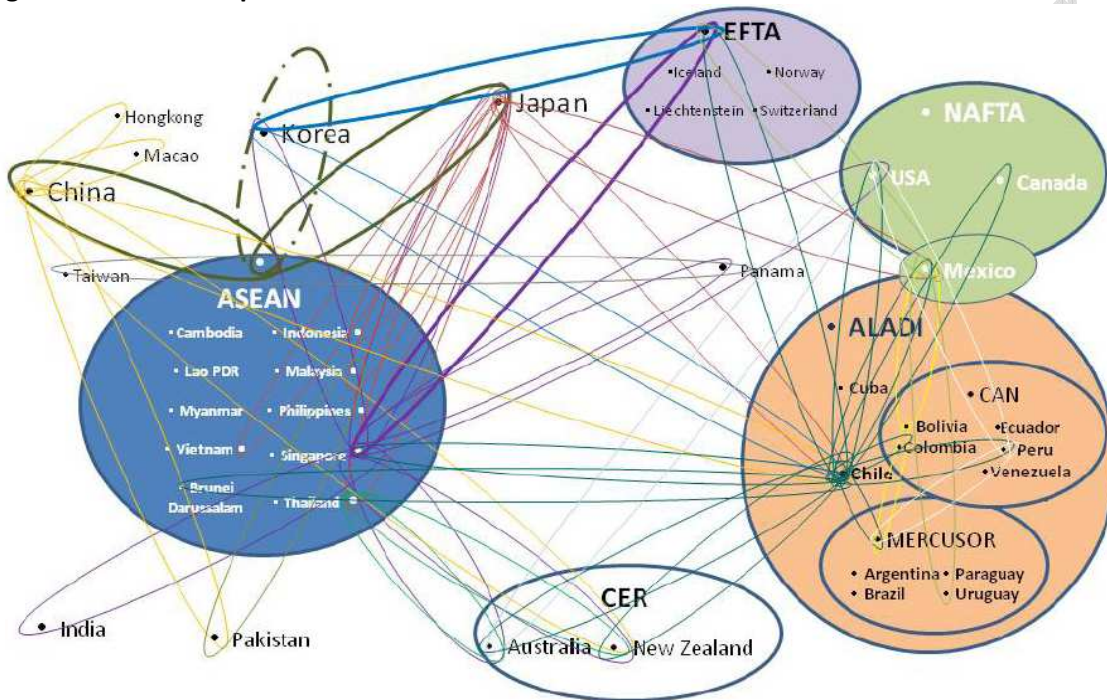
Regional and Plurilateral Preferential Trade Areas for selected Southeast Asian economies, as of January 2008

Countries	Partners: Asia	Partners: Rest of the world	Agreements	Countries
Indonesia - Signed	ASEAN (9) + China (1) + Republic of Korea (1) + Japan (1) = 12	None	4	12
Indonesia - Negotiating	India (1) + Australia (1) + New Zealand (1) + Pakistan (1) = 4	European Union (27)	5	31
Malaysia - Signed	ASEAN (9) + China (1) ^b + Japan (1) + Republic of Korea (1) = 12	None	4	12
Malaysia - Negotiating	Australia (1) + New Zealand (1) + Pakistan (1) + India (1) = 4	United States (1) + Chile (1) + European Union (27) = 29	7	33
Philippines - Signed	ASEAN (9) + China (1) + Republic of Korea (1) + Japan (1) = 12	None	4	12
Philippines - Negotiating	Australia (1) + New Zealand (1) + India (1) = 3	European Union (27)	4	30
Singapore - Signed	ASEAN(9) + China (1) + Republic of Korea (1) + Australia (1) + New Zealand (1) + Japan (1) = 14	United States (1) + EFTA (4) + Jordan (1) + Panama (1) + Chile (1) = 8	10	22
Singapore - Negotiating	India (1) + Pakistan (1) = 2	GCC (6) + Canada (1) + European Union (27) + Mexico (1) + Sri Lanka (1) + Perú (1) + Egypt (1) + Ukraine (1) = 39	10	41
Thailand - Signed	ASEAN (9) + China (1) + Republic of Korea (1) + India (1) + Bahrain (1) + Australia (1) + New Zealand (1) + Japan (1) = 16	None	8	16
Thailand - Negotiating	Bay of Bengal Initiative of Multisectoral, Technical and Economic Cooperation (BIMSTEC) (6) + India (1) = 7	Peru (1) + United States (1) + EFTA (4) + European Union (27) = 33	6	40

Viet Nam - Signed	ASEAN (9) + China (1) + Republic of Korea (1) = 11	None	3	11
Viet Nam - Negotiating	Japan (1) + Australia (1) + New Zealand (1) + India (1) = 4	Chile (1) + European Union (27) = (28)	6	32

Source: ECLAC 2008b for the LAC and APTIAD (2010) for ASEAN

Figure 1A. More complex noodle bowl



Source: Medalla and Balboa (2009)