# IMPLICATIONS OF A THAILAND - BRAZIL FREE TRADE AGREEMENT

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#### Abstract

This paper is an exploratory research on the Thailand-Brazil trade pattern and analyzes the implications on bilateral trade if Thailand signs a free trade agreement (FTA) with Brazil. We use the concentration ratio to study the market share of the major products and the revealed comparative advantage index to examine the export potential with a Thailand - Brazil FTA. Our results show that most of the major goods exported from Thailand to Brazil are manufactured or semi-manufactured products for the automobile industry and most of the major products exported from Brazil to Thailand are commodities or processed commodities, consequently the trade is complementary between these economies. As most of Brazilian exports face zero or low MFN<sup>2</sup> duties in Thailand and on the other side Thailand exports face MFN duties in Brazil, the overall result of a FTA is that Thailand will expand more exports than Brazil.

Keywords: Free Trade Agreement, revealed comparative advantage, Thailand, Brazil

#### **1. Introduction**

Thailand trade policy shifted from multilateralism to bilateralism since the nation began to tie free trade agreements (FTA) with other countries or regions<sup>3</sup> (Chirathivat & Mallikamas: 2004). This shift was on the wave of the called new Asian regionalism in the

<sup>1</sup> University of the Thai Chamber of Commerce, Southeast Asia and Latin America Trade Center (UTCC/SEA-LAC) research project.



<sup>&</sup>lt;sup>2</sup> MFN means Most Favored Nation

<sup>&</sup>lt;sup>3</sup> Thailand has bilateral free trade agreements (FTA) with Australia, Bahrain, Chile, India, Japan, New Zealand and Peru.

late 1990s, whose feature are: countries have not been members of free trade agreements yet are in trade negotiations; countries are members of more than one regional trade agreement; many agreements are cross-regions and many of them are bilateral (Harvie & Lee: 2002). Thailand has already signed cross-regions FTA: with Peru and Chile among Latin America countries, but is there still room for more agreements in this region? Can Thai trade companies seek and identify new markets far from Asia, as Brazil? The major objective of this study is present the trade structure between Thailand and Brazil in order to a future bilateral trade agreement negotiation which could benefit both economies, firms and consumers by governments export promotion and decreasing products' prices as consequence of tariffs reduction and elimination of non-tariffs measures.

This paper has two aims: the first is to do an exploratory research to build a basic understanding on the Thailand-Brazil trade pattern and the second is to analyze the implications of a free trade agreement between the two economies. To reach these aims, we describe the bilateral trade from 2002 to 2011 and major exports products between the two economies, and we calculate the revealed comparative advantage index (RCA) to analyze which goods have exports potential.

To the literature review we have just selected works on Thailand bilateral trade agreements. Athukorala & Kohpaiboon (2011) examines the economic impacts of the Thailand - Australia FTA describing the structure of tariff preferences and the rules of origin. Thirawat, Robins & Baume (2012) analyzes consequences of Thailand FTAs for Thai food industry multinational companies empirically by interviews and questionnaires, finding that the Thailand FTAs strategy is positive to the firms. Hayakawa, K. (2014) studies the bilateral cumulation and diagonal cumulation FTAs schemes, those are related to rules of origin, applying to Thailand exports to Japan. It compares the Japan-Thailand Economic Partnership Agreement and the ASEAN-Japan Comprehensive Economic Partnership rules of origins under respectively the bilateral and diagonal cumulations. The empirical results conclude that there is a positive effect of trade creation by a diagonal cumulation. Hoadley (2007) analyzes the cross-regional trade agreements by Singapore, Thailand and Malaysia trade negotiations. According to Hoadley (2007: 211) Thailand's FTA policy was influenced to the need to face economic blocks as European Union and NAFTA and other East Asian that began to negotiate cross- regional FTAs.

Our research expands the studies on bilateral trade between Latin America and Southeast Asia regions, a field almost unexplored<sup>4</sup>. These studies may increase since the governments talks between MERCOSUR and ASEAN began in 2008, some Thai institutions such as the Thailand International Development Cooperation Agency (TICA) have had an interest to stronger ties between these two world regions and the Brazilian government intends to nominate a special Ambassador for ASEAN affairs.

According to the World Trade Organization (WTO), Thailand was the 24th major world exporter and the 22nd major world importer country and Brazil was the 22nd major world exporter and the 21st major world importer country in 2011. These figures show that the two economies are mayor players in the world trade to the total of 153 WTO's members.

 $<sup>^4</sup>$  We have just found Hosono (2000), Olivera (2010) and Mikic & Jakobson (2010) on ASEAN and Latin America trade.

Thailand-Brazil bilateral trade has increased. Thailand exports to Brazil were US\$ 161.2 million in 2002, but they increased to US\$ 2.266 billion in 2011. These exports grew up about 14-fold. Brazil exports to Thailand were US\$ 356.4 million in 2002, but they increased to US\$ 2.2662 billion in 2011. Hence, the value enlarged almost 6.4-fold.



Figure 1 Thailand – Brazil bilateral trade

Table 1 shows the ten major export products of Thailand to Brazil. The concentration ratio  $(CR)^5$  to the top 3 products exported is 32.6 %, the concentration ratio to the top 5 products exported is 39.8 % and the concentration ratio to the top 10 products exported is 52.8 %.

 Table 1 Ten major export products of Thailand to Brazil by 4 digit HS code (simple average 2009 - 2011)

<sup>5</sup> The concentration ratio of m major products exported to n total products exported is:

$$CR_{m} = \frac{\sum_{i=1}^{m} X_{i}}{\sum_{i=1}^{n} X_{i}} = \sum_{i=1}^{m} p_{i}$$

Where X is the value of the product exported and pi is the exported share of the ith product to total exports in percent.

 $CR_m$  is the percentage of total exports accounted by a given number of major products exported. Threeexport products, five-export products and ten-export products concentration ratio are measured. They are the exports share of the three major products, the exports share of the five major products and the exports share of the ten major products. Similarly, the concentration ratios are calculated to imports.



Ranking	Product HS code	Product name	US\$	Share	CR
			1000	(%)	(%)
1	4001	Natural rubber, natural gums	257030	15.8	
2	8708	Parts and accessories for motor vehicles	197529	12.1	
		Compression-ignition internal combustion			
3	8408	piston engines	75920	4.7	32.6
4	8421	Centrifuges, filters	67051	4.1	
5	8409	Parts for vehicles engines	49382	3.0	39.8
6	4011	New pneumatic tyres, of rubber.	48793	3.0	
7	5510	Yarn (other than sewing thread) of artificial stap	45775	2.8	
8	8714	Parts and accessories of vehicles	45033	2.8	
		Air or vacuum pumps, air or other gas			
9	8414	compressors	37515	2.3	
		Spark-ignition reciprocating or rotary internal			
10	8407	combustion piston engine	35180	2.2	52.8

Table 2 shows the ten major export products of Brazil to Thailand. The concentration ratio to the top 3 products exported is 73.3 %, the concentration ratio to the top 5 products exported is 79.3 % and the concentration ratio to the top 10 products exported is 86.4 %.

**Table 2** Ten major export products of Brazil to Thailand by 4 digit HS code (simpleaverage 2009 - 2011)

Ranking	Product HS code	Product name		Share (%)	CR (%)
1	1201	Soya beans, whether or not broken.	562632	31.3	
2	2304	Oil-cake and other solid residues, whether or not	530621	29.5	
3	7207	Semi-finished products of iron or non-alloy steel.	226297	12,6	73,3
4	5201	Cotton, not carded or combed.	57888	3.2	
5	2709	Petroleum oils and oils obtained from bituminous minerals	49865	2.8	79.3
6	7201	Pig iron and spiegeleisen in pigs, blocks or other	49850	2.8	
7	4104	Tanned or crust hides and skins of bovine	22431	1.2	
8	7108	Gold (including gold plated with platinum) unwroug	19913	1.1	
9	8706	Chassis fitted with engines, for the motor vehicle	17645	1.0	
10	4703	Chemical wood pulp, soda or sulphate	16616	0.9	86.4

Comparing tables 1 and 2, we conclude that the Brazil's exports to Thailand are more concentrated than Thailand's exports to Brazil. Therefore Thailand's exports to Brazil are more diversified in products than the Brazil's exports to Thailand. Most of the top 10 goods exported from Thailand to Brazil are manufactured or semi-manufactured products for automobile industry and most of the top 10 goods exported from Brazil to Thailand are commodities or processed commodities.



#### 2. Methodology

We use the revealed comparative advantage index (RCA) proposed by Balassa (1965) to analyze which products have exports potential.

The RCA is calculated as follows:

$$RCA_{ij} = \frac{x_i^j/x_i^j}{x_i^W/x_i^W}$$

Where:

 $\mathbf{x}_{i}^{j}$  is the value of country j's exports of product i

 $\mathbf{X}^{j}$  is the value of country j's total exports

 $X_{I}^{W}$  is the value of world exports of product i

 $\mathbf{X}^{W}$  is the value of world total exports.

If  $RCA_{ij} > 1$  the product i of country j has revealed comparative advantage and if  $RCA_{ij} < 1$  the product i of country j has revealed comparative disadvantage.

We organize the trade potential between the products of two countries according their revealed comparative advantage or disadvantage in 4 categories. Thus we find 4 possibilities of trade to the products.

		Country A	
		$RCA_{iA} > 1 RCA_{iA} < 1$	
Country B	$RCA_{iB} > 1$	Ι	II
	$RCA_{iB} < 1$	III	IV

 Table 3 Trade potential between Country A and Country B

(I) If  $RCA_{iA} > 1$  and  $RCA_{iB} > 1$ , as the product i has revealed comparative advantage in both countries A and B, they will compete in the markets.

(II) If  $RCA_{iB} > 1$  and  $RCA_{iA} < 1$ , as the product i has revealed comparative advantage in country B and has revealed comparative disadvantage in country A, there is more possibility of product i's exports from country B to country A.

(III) If  $RCA_{iA} > 1$  and  $RCA_{iB} < 1$ , as the product i has revealed comparative advantage in country A and has revealed comparative disadvantage in country B, there is more possibility of product i's exports from country A to country B.

(IV) If  $RCA_{iA} < 1$  and  $RCA_{iB} < 1$ , as the product i has revealed comparative disadvantage in the country A and has also revealed comparative disadvantage in the country B, there is few possibility to expand the product i's exchange between the country A and the country B.

## 3. Results

This section analyzes the trade between Thailand and Brazil by the methodology explained before. To calculate the indexes we use the harmonized system (HS) classification of products at 4 - digit level. To smooth economic fluctuations we also use the simple average between 2009, 2010 and 2011 to calculate the revealed comparative advantage<sup>6</sup>. Trade data base is the World Bank's World Integrated Trade Solution (http://wits.worldbank.org).

Table 4 shows the chapter HS code, the number of goods at 4-digit in each chapter, the quantity of Brazilian products has revealed comparative advantage ( $RCA_{iBrazil} > 1$ ), the quantity of Brazilian products has revealed comparative disadvantage ( $RCA_{iBrazil} < 1$ ), the quantity of Thailand products has revealed comparative advantage ( $RCA_{iThai} > 1$ ), the quantity of Thailand products has revealed comparative disadvantage ( $RCA_{iThai} > 1$ ), the quantity of Thailand products has revealed comparative disadvantage ( $RCA_{iThai} > 1$ ), the quantity of Thailand products has revealed comparative disadvantage ( $RCA_{iThai} > 1$ ).

Chapter HS Code	4-digit quantity of products	RCA Brazil > 1	RCA Brazil < 1	RCA Thailand > 1	RCA Thailand < 1
01	6	1	5	2	4
02	9	6	3	0	9
03	7	0	7	5	2
04	10	3	7	1	9
05	9	5	4	2	7
06	4	1	3	1	3
07	14	0	14	2	12
08	14	6	8	4	10
09	10	7	3	1	9
10	7	2	5	2	5
11	9	2	7	3	6
12	12	2	10	0	12
13	2	2	0	1	1
14	2	1	1	0	2
15	20	6	14	4	16
16	4	3	1	4	1
17	4	3	1	3	1
18	6	4	2	0	6
19	5	1	4	3	2
20	9	1	8	4	5
21	6	2	4	4	2
22	9	2	7	1	8
23	8	5	3	3	5
24	3	2	1	0	3
25	29	11	18	7	22
26	19	8	11	2	17
27	16	2	14	3	13

Table 4 Revealed comparative advantage in Brazil and in Thailand

<sup>&</sup>lt;sup>6</sup> We adopt the trade value of Thailand imports from Brazil, as Brazil exports to Thailand.



Chapter HS Code	4-digit quantity of products	RCA Brazil > 1	RCA Brazil < 1	RCA Thailand > 1	RCA Thailand < 1
28	50	11	39	5	45
29	40	6	34	7	33
30	6	0	6	0	6
31	6	0	6	0	6
32	15	2	13	2	13
33	7	4	3	3	4
34	7	0	7	4	3
35	7	2	5	1	6
36	6	1	5	1	5
37	7	0	7	1	6
38	25	3	22	4	21
39	26	4	22	14	12
40	17	3	14	13	4
41	11	5	6	2	9
42	5	2	3	1	4
43	4	1	3	1	3
44	21	6	15	7	14
45	3	0	3	0	3
46	2	0	2	0	2
47	6	3	3	1	5
48	22	5	17	7	15
49	11	0	11	1	10
50	6	2	4	0	6
51	7	0	7	1	6
52	12	2	10	8	4
53	10	4	6	2	8
54	8	0	8	2	6
55	16	3	13	11	5
56	9	2	7	3	6
57	5	0	5	1	4
58	11	1	10	3	8
59	11	1	10	1	10
60	6	0	6	2	4
61	17	0	17	9	8
62	17	0	17	3	14
63	10	0	10	4	6
64	6	3	3	0	6
65	6		5	2	4
66	3	0	3	0	3
67	4	0	4	0	4
68	15	6	9	6	9
69	14	1	13	4	10
70	19		18	6	13

Chapter HS Code	4-digit quantity of products	RCA Brazil > 1	RCA Brazil < 1	RCA Thailand > 1	RCA Thailand < 1
71	17	2	15	5	12
72	29	8	21	5	24
73	26	5	21	8	18
74	16	0	16	4	12
75	8	2	6	0	8
76	16	2	14	3	13
78	4	0	4	1	3
79	6	1	5	2	4
80	4	1	3	1	3
81	12	2	10	2	10
82	15	4	11	0	15
83	11	1	10	2	9
84	85	11	74	15	70
85	47	3	44	19	28
86	7	3	4	0	7
87	15	5	10	5	10
88	5	1	4	2	3
89	7	1	6	3	4
90	32	0	32	8	24
91	14	0	14	6	8
92	7	0	7	1	6
93	6	2	4	1	5
94	6	0	6	0	6
95	6	0	6	2	4
96	18	1	17	6	12
97	6	0	6	0	6

 Table 5
 Trade potential between Brazil and Thailand

		Thailand		
		$RCA_{iThai} > 1  RCA_{iThai} < 1$		
Brazil	$RCA_{iBrazil} > 1$	55	176	
	$RCA_{iBrazil} < 1$	254	710	

The quantity of products in category (I) is 55, when  $RCA_{iThai} > 1$  and  $RCA_{iBrazil} > 1$ . These products have revealed comparative advantages in both Thailand and Brazil, hence they will compete in the markets with the FTA.

The quantity of products in category (II) is 176, when  $RCA_{iBrazil} > 1$  and  $RCA_{iThai} < 1$ . These products have revealed comparative advantages in Brazil and have revealed comparative disadvantages in Thailand. Consequently there is more possibility of these products to be exported from Brazil to Thailand with the FTA.



The quantity of products in category (III) are 254, when  $RCA_{iThai} > 1$  and  $RCA_{iBrazil} < 1$ . These products have revealed comparative advantages in Thailand and have revealed comparative disadvantages in Brazil. Therefore there is more possibility of these products to be exported from Thailand to Brazil with the FTA.

The quantity of products in category (IV) are 710, when  $RCA_{iThai} < 1$  and  $RCA_{iBrazil} < 1$ . These products have revealed comparative disadvantage both in Thailand and in Brazil. Hence the possibility to increase exchange these products between Thailand and Brazil with the FTA is small

After we have categorized the trade potential between Brazil and Thailand, we examine the MFN duty and the trade value of those products<sup>7</sup>.

## 3.1 Category I

## **3.1.1 Exports from Thailand to Brazil**

The products exported from Thailand to Brazil are "Prepared or preserved fish, caviar" (1604) whose MFN duty is 16.00 % and the trade volume is US\$ 15.28 million; "Polymers of ethylene, in primary forms" (3901) whose MFN duty is 11.00 % and the trade volume is US\$ 27.13 million; "New pneumatic tires, of rubber" (4011) whose MFN duty is 12.26 % and the trade volume is US\$ 48.79 million; "Spark-ignition reciprocating or rotary internal combustion" (8407) whose MFN duty is 14.25 % and the trade volume is US\$ 35.18 million; "Parts suitable for use solely or principally" (8409) whose MFN duty is 8.82 % and the trade volume is US\$ 49.38 million; "Air or vacuum pumps, air or other gas compressors" (8414) whose MFN duty is 14.71 % and the trade volume is US\$ 37.51 million.

## 3.1.2 Exports from Brazil to Thailand

The products exported from Brazil to Thailand are "Tanned or crust hides and skins of bovine" (4104) whose MFN duty is 3.75% and the trade volume is US\$ 22.40 million; "Precious stones (other than diamonds) and semi-precious stones" (7103) whose MFN duty is 0.0% and the trade volume is US\$ 10.66 million.

## 3.2 Category II

#### **3.2.1 Exports from Thailand to Brazil**

The products exported from Thailand to Brazil are "Oxygen-function aminocompounds" (2922) whose MFN duty is 0.81 % and the trade volume is US\$ 10.31 million; "Electrical lighting or signaling equipment" (8512) whose MFN duty is 17.60 % and the trade volume is US\$ 113.77 million.

<sup>&</sup>lt;sup>7</sup> We get the simple average of MFN (Most Favored Nation) duty to the products whose trade is above US\$ 10 million.



## 3.2.2 Exports from Brazil to Thailand

The products exported from Brazil to Thailand are "Soya beans, whether or not broken" (1201) whose MFN duty is 5.00 % and the trade volume is US\$ 562.63 million; "Oil-cake and other solid residues" (2304) whose MFN duty is 6.00 % and the trade volume is US\$ 530.62 million; "Petroleum oils and oils obtained from bituminous mineral" (2709) whose MFN duty is 0.00 % and the trade volume is US\$ 498.65 million; "Pig iron and spiegeleisen in pigs, blocks or other" (7201) whose MFN duty is 0.00 % and trade volume is US\$ 49.85 million; "Semi-finished products of iron or non-alloy steel" (7207) whose MFN duty is 0.00 % and the trade volume is US\$ 22.63 million; "Chemical wood pulp, soda or sulphate" (4703) whose MFN duty is 0.00 % and trade volume is US\$ 16.61 million; "Cotton, not carded or combed" (5201) whose MFN duty is 0.00 % and the trade volume is US\$ 57.89 million; "Chassis fitted with engines, for the motor vehicle" (8706) whose MFN duty is 25.71 % and trade volume is US\$ 17.64 million.

## 3.3. Category III

## **3.3.1** Exports from Thailand to Brazil

The products exported from Thailand to Brazil are "Polycarboxylic acids, their anhydrides, halides" (2917) whose MFN duty is 9.23 % and trade volume is US\$ 11.49 million; "Polyacetals, other polyethers and epoxide resins" (3907) whose MFN duty is 11.48 % and trade volume is US\$ 16.34 million; "Other articles of plastics" (3926) whose MFN duty is 16.84 % and trade volume is US\$ 17.71 million: "Natural rubber, balata, gutta-percha, guayule" (4001) whose MFN duty is 4.00 % and trade volume is US\$ 257.10 million; "Articles of apparel and clothing accessories" (4015) whose MFN duty is 16.00 % and trade volume is US\$ 29.35 million; "Other articles of vulcanized rubber" (4016) whose MFN duty is 15.00 % and trade volume is US\$ 14.47 million; "Synthetic filament yarn (other than sewing thread)" (5402) whose MFN duty is 15.73 % and trade volume is US\$ 27.12 million: "Yarn (other than sewing thread) of synthetic staple" (5509) whose MFN duty is 17.56 and trade volume is US\$ 10.69 million; "Yarn (other than sewing thread) of artificial staple (5510) whose MFN duty is 18.00 % and trade volume is US\$ 45.77 million; "Other articles of iron or steel" (7326) whose MFN duty is 16.00 % and trade volume is US\$ 28.32 million; "Compression-ignition internal combustion piston engine" (8408) whose MFN duty is 13.00 % and trade volume is US\$ 75.92 million; "Air conditioning machines, comprising a motor-driver" (8415) whose MFN duty is 15.56 % and trade volume is US\$ 18.83 million; "Automatic data processing machines and units" (8471) whose MFN duty is 11.91 % and trade volume is US\$ 31.44 million; Electrical ignition or starting equipment (8511) whose MFN duty is 17.64 % and trade volume is US\$ 13.82 million; "Parts and accessories suitable for use solely" (8522) whose MFN duty is 17.00 % and trade volume is US\$ 10.04 million; "Parts suitable for use solely or principally" (8529) with whose MFN duty is 12.00 % and trade volume is US\$ 31.52 million; "Boards, panels, consoles, desks, cabinets and others (8537) whose MFN duty is 10.70 % and trade volume is US\$ 22.17 million; "Electronic integrated circuits and micro assemblies" (8542) whose MFN duty is 2.23 % and trade volume is US\$ 11.23 million; "Parts and accessories of the motor vehicles" (8708) whose MFN duty is 15.31 % and trade volume is US\$ 197.53



million; "Parts and accessories of vehicles of headings 87.1" (8714) whose MFN duty is 15.40 and trade volume is US\$ 45.03 million;

#### 3.3.2 Exports from Brazil to Thailand

The product exported from Brazil to Thailand is "Gold (including gold plated with platinum) unwrought" (7108) whose MFN duty is 0.00 % and trade volume is US\$ 19.91 million.

#### 3.4. Category IV

#### **3.4.1. Exports from Thailand to Brazil**

The products exported from Thailand to Brazil are "Centrifuges, including centrifugal dryers; filtering" (8421) whose MFN duty is 12.26 % and trade volume is US\$ 67.05 million; "Base metal mountings, fittings and similar article" (8302) whose MFN duty is 16.00 % and trade volume is US\$ 32.46 million; "Pumps for liquids" (8413) whose MFN duty is 14.67 % and trade volume is US\$ 16.58 million; "Machinery, plant or laboratory equipment" (8419) whose MFN duty is 14.67 % and trade volume is US\$ 12.70 million; "Electrical apparatus for switching or protecting" (8536) whose MFN duty is 14.77 % and trade volume is US\$ 11.09 million; "Insulated (including enameled or anodized) wire" (8544) whose MFN duty is 14.88 % and trade volume is US\$ 16.78 million; "Motor cars and other motor vehicles" (8703) whose MFN duty is 35.00 % and trade volume is US\$ 30.98 million; "Automatic regulating or controlling instruments" (9032) whose MFN duty is 16.24 % and trade volume is US\$ 11.25 million;

#### 3.4.2 Exports from Brazil to Thailand

There is no product exported from Brazil to Thailand under this category.

## 4. Conclusions

Our results reveal that Brazil's exports to Thailand are more concentrated than Thailand's exports to Brazil hence Thailand's exports to Brazil are more diversified in products than the Brazil's exports to Thailand. Most of the top 10 goods exported from Thailand to Brazil are manufactured or semi-manufactured products for automobile industry and most of the top 10 goods exported from Brazil to Thailand are commodities or processed commodities. Consequently the two economies have a complementary trade among the top 10 products exported.

Among the products whose trade volume is above US\$ 10 million, Thailand exports much more products to Brazil than Brazil exports to Thailand. Most of Brazilian exports face zero or low MFN duties in Thailand. But all Thailand exports face MFN duties in Brazil, most of them are manufactured goods. Therefore, if the free trade agreement (FTA) is signed between the two nations, Thailand will expand exports mainly in products under category III and Brazil will expand exports mainly in products in category II. As overall result, Thailand will expand more exports than Brazil.



One limitation of our study is neither to assess the impacts of a bilateral trade agreement between Thailand and Brazil, nor to capture the trade creation and deviation effects between those economies. Further researches could include a gravitational model besides the revealed comparative advantage index to assess these impacts and effects and trade studies between Brazil and ASEAN or between Brazil and countries in Southeast Asia using the same methodology as in this paper.

## References

Athukorala, P. & Kohpaiboon, A (2011), "Australian-Thai Trade: Has the Free Trade Agreement Made a Difference?", *The Australian Economic Review*, Vol44 (4): pp. 457-467.

Balassa, B. (1965), "Trade Liberalization and Revealed Comparative Advantage", *Manchester School of Economic and Social Studies*, Vol 33 (2): pp. 99-124.

Chirathivat, S. & Mallikamas, S. (2004), "Thailand's FTA Strategy: current development and future challenges", *ASEAN Economic Bulletin*, Vol 21 (1): pp. 37-53.

Harvie, C. & Lee, H.-H. (2002), "New Regionalism in East Asia: How Does it Relate to the East Asian Economic Development Model?", *ASEAN Economic Bulletin*, Vol 19 (2): pp. 123-140.

Hayakawa, K. (2014), "Impact of diagonal cumulation rule on FTA utilization: evidence from bilateral and multilateral FTAs between Japan and Thailand", *Journal of the Japanese and International Economies*, (32), pp. 1-16.

Hoadley, S. (2007), "Southeast Asian Cross-Regional FTAs: Origins, Motives and Aims, Pacific Affairs", Vol 80 (2): pp. 303-325.

Hosono, A. (2000), ASEAN, MERCOSUR and the Possibilities of Cooperation East Asia-Latin America. IV Reunion de la Red de America Latina y el Caribe de Centros de Estudios de Asia-Pacifico.

Mikic, M. & Jakobson, E. (2010), "Examining the potential for cross-South Pacific trade: ASEAN and Latin America, Trade and Investment Division" Staff Working Paper no. 2/10, Bangkok: United Nations ESCAP.

Olivera, M. (2010), "MERCOSUR y ASEAN: ganadores y perdedores en un area de libre comercio", Documento de Trabajo. Premio Jovenes Economistas de La Red Mercosur.

Thirawat, N., Robins, F. & Baume, G. (2012), "Internationalization Factors of Thai Multinationals and Thailand's Bilateral Trade Policy", *Journal of Asia-Pacific Business*, (1): pp. 143-176.

