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Sabah-Korea Trade Relations and Comparative Advantage: An Overview

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Abstract: The trade relations between Malaysia and the Republic of Korea can be traced even, since Federation of Malaysia was formed. Sabah as part of Malaysia has expanded its trade with Korea overtime. Korea is in Sabah's top 30 most important trading partner. This study attempts to give an overview of Sabah and Korea bilateral trade relations by analysing the trade pattern for the past 10 years. In addition, this study examines the categories of products that both Sabah and Korea have comparative advantage in.

Key words: Sabah-Korea, bilateral trade, Revealed Comparative Advantage (RCA), products, recommendations, examines

INTRODUCTION

Malaysia is a small and open economy. To date, Malaysia has signed about 12 trade agreements bilaterally or regionally to expand trade and strengthening trade relations with other nations (Idris, 2016). In discussing Malaysia's trade relations there are many factors that can be attributed to have played role in contributing to Malaysia's trade. Factors such as Foreign Direct Investment (FDI), distance, gross domestic product among others have been discussed in the literature as playing important role in determining trade between countries (Idris and Idris, 2013, 2016).

The trade relations between Malaysia and the Republic of Korea can be traced even, since Federation of Malaysia was formed. In 1964, Malaysia's trade with Korea was reported to be worth US$5.1 million. In 2015, the value of trade between these two countries was reported to be US$14.4 billion, an increase by 281,124% or 2811 times in about 51 years. It is interesting to note that Republic of Korea is identified as amongst Sabah's important trading partners where it is listed in the top 30 of Sabah's most important trading partners in 2014.

This study attempts to study Sabah and Korea bilateral trade relations by analysing the trade pattern for the past 10 years. In addition, this study examines the categories of products that both Sabah and Korea have comparative advantage in. The niche of Sabah and Korea trade sectors are to be identified by computing the revealed comparative advantage index. Moreover, this study attempts to propose policy recommendations on how to further strengthen and sustain Sabah-Korea bilateral trade relations. This study shall fill in the gap in the literature with regard to studies related to Sabah-Korea trade.

Sabah-Korea trade; an overview: Korea is amongst Sabah's important trading partners. In 2014, bilateral trade value is reported to be worth RM1.82 billion making it to be the top 30 trading partners of Sabah. In the period of 2004-2014, Sabah experienced surplus in its trade with Korea. The trade surplus ranged from RM1billion to RM2.4 billion. Table 1 and Fig. 1 give the details of Malaysia-Korea trade from 2004-2014.

In terms of product categories, Sabah's most important export products to Korea are crustaceans and molluscs, fresh, chilled frozen, salted or in brine or dried (SITC-034), feeding stuff for animals (not including cereals) (SITC-081), other fixed vegetable oils and fluid or solid, crude, refined or purified (SITC-422), animal or vegetable oils and fats, processed and waxes of animals or vegetable origin (SITC-431), alcohol, phenols, phenol-alcohols and their derivatives (SITC-512), veneers, plywood, particle boardand other wood, worked, n.e.s. (SITC-634), pig iron, spiegeleisen, sponge iron, iron or steel granules and powders and ferro-alloys. For import products from Republic of Korea, motor cars and other motor vehicles (SITC-781), heating and cooling equipment and parts thereof (SITC-741) and worn clothing and other worn textile articles (SITC-269) are among the most imported ones in 2014.

Sabah's economy has been integrated with Korean economy through trade agreement. ASEAN-Korea Free

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Table 1: Sabah-Korea Trade (2004-2014)

Years	Sabah's export to Korea (RM)	Sabah's import from Korea (RM)	Trade balance	Sabah's trade balance position
2004	1,728,316,000	121,021,000	1,607,295,000	Surplus
2005	1,179,441,000	156,199,000	1,023,242,000	Surplus
2006	1,434,248,000	146,099,000	1,288,149,000	Surplus
2007	1,456,032,000	226,275,000	1,229,757,000	Surplus
2008	2,202,111,000	221,499,000	1,980,612,000	Surplus
2009	1,527,272,000	146,833,000	1,380,439,000	Surplus
2010	1,898,499,000	220,043,000	1,678,456,000	Surplus
2011	2,732,990,000	298,604,000	2,434,386,000	Surplus
2012	1,795,030,000	730,420,000	1,064,610,000	Surplus
2013	1,335,561,000	332,057,000	1,003,504,000	Surplus
2014	1,582,175,000	234,745,000	1,347,430,000	Surplus

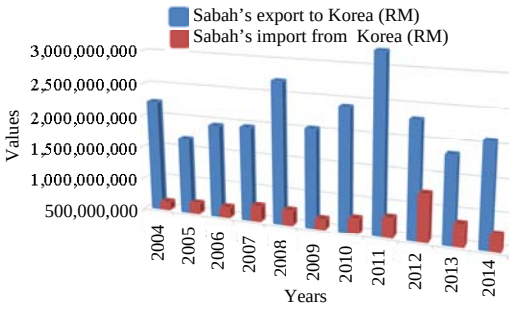

Fig. 1 Sabah-Korea trade (2004-2014)

Trade Agreement (AKFTA) which was signed in 2006 indeed may explain the sustainable of trade between Sabah and Korea.

Literature review: This study focuses on the studies that have attempted to study Malaysia bilateral trade relations with Korea from economic perspective. Indeed, there is limited number of studies which have attempted to analyze the trade relations between Malaysia and Korea.

ISIS (2010) analyses Malaysia-Korea ties from political and diplomatic ties, trade and investment ties as well as socio-cultural and academic ties perspective. From trade and investment ties perspective the study highlights that Republic of Korea's main export to Malaysia is intermediate electronics goods where it accounted for more than 50% of its export in 2008 and is very much dependent on Malaysia's electronics industry. The study also highlights that there was a reduction in Korea's export compared to the time prior to 1997's Asian financial crisis is due to the reduction in Korean investment in Malaysia.

Kuik (2015) study on Malaysia relations with major and middle powers discuss that Malaysia-Korea relations has gradually improved, since 1960. At the early years, Korea's import were predominantly Malaysia's resources and raw materials. Eventually, bilateral trade structure had evolved from primary sector product to manufacturing based. The Look East Policy (LES) further increase cooperation and hence bilateral trade increase tremendously. Moreover, the ASEAN FTA has further add impetus towards greater integration and bilateral trade between Malaysia and Korea.

MATERIALS AND METHODS

The niche of Sabah and Korea trade sectors are to be identified by computing the Revealed Comparative Advantage (RCA) Index. The RCA is computed based Sabah's and Republic of Korea's top 20 export products (RCA index for Sabah and Republic of Korea are computed for their top 20 export products only. This is due to the fact that the top 20 list of product exports for both Sabah and Republic of Korea represent more than 80 and 60% of its export, respectively). David Ricardo in 1817 wrote 'Principles of Political Economy and Taxation' in which he presented the law of comparative advantage. The law of comparative advantage refers to the ability of a party to produce goods or service at a lower opportunity cost or high efficiency than other party.

Revealed Comparative Advantage (RCA) was used by Balassa (1965) to measure relative export performance by country and industry, defined as a country's share of world exports of a good divided by its share of total world exports. RCA measures a country's trade specialization in a commodity group and is defined as a country's sectoral share divided by the world sectoral share. Many studies have used similar index to measure comparative advantage. RCA or weighted RCA can be found for instance in the studies by Idris (2011), Idris (2015) and Shayesteh and Ranjbar (2016). The $IRCA_{mk}$ measures the index of revealed comparative advantage of country m in commodity k as follows:

$$IRCA_{mk} = \frac{X_{mk}/X_{m}}{X_{wk}/X_{w}}$$

Where:

X_{mk} = Country m's export of commodity k
X_{wk} = World exports of commodity k
X_m = The total exports of country m
X_w = Total world exports

The index value ranges between zero and infinity with values greater than unity indicating specialization in that commodity group while a value between zero and one indicates no specialization in that commodity group. A comparative advantage is "revealed" if RCA is greater than one. If RCA is less than unity, the country is said to have a comparative disadvantage in the commodity/industry.

Firstly, RCA index of Sabah's export product based on Standard International Trade Code (SITC) classification (at 1 digit and 3 digit level) for the year 2014 is computed. Then, similar approach is undertaken for Republic of Korea at 1 digit and 3 digit level. In addition, several interviews with relevant authorities were undertaken to obtain some information with regard to Sabah's trade with Korea.

RESULTS AND DISCUSSION

RCA for Sabah and Republic of Korea: Table 2 and 3 show the RCA index for both Sabah and Korea, respectively at one digit code. Table 4 and 5 report the RCA index for both Sabah and Korea at three digit level.

Table 2: Sabah's RCA at 1 digit code (1 DC)

Export product categories	Sabah export (US$)	RCA 1DC	RCA (Yes/No)
SITC-0	441,788,125	0.51	No
SITC-1	30,980,625	0.14	No
SITC-2	430,917,188	0.72	No
SITC-3	6,228,523,438	2.91	Yes
SITC-4	5,151,757,813	25.44	Yes
SITC-5	830,760,000	0.49	No
SITC-6	873,212,188	0.49	No
SITC-7	589,477,813	0.12	No
SITC-8	151,581,250	0.09	No
SITC-9	85,522,813	0.11	No

Table 3: Republic of Korea's RCA at 1 Digit Code (1 DC)

Export product categories	Republic of Korea's export (US$)	RCA 1DC	RCA (Yes/No)
Total export	573,074,773,090	1.00	No
SITC-0	4,990,953,916	0.15	No
SITC-1	1,465,038,881	0.17	No
SITC-2	6,421,034,029	0.28	No
SITC-3	52,670,571,096	0.64	No
SITC-4	59,028,833	0.01	No
SITC-5	67,748,261,069	1.04	Yes
SITC-6	75,652,169,262	1.09	Yes
SITC-7	315,103,431,679	1.69	Yes
SITC-8	47,804,596,244	0.72	No
SITC-9	1,159,688,081	0.04	No

Table 4: Sabah's RCA at 3 Digit Code (3 DC)

3DC	Product	Sabah export (IN US '000)	Sabah total export	RCA index	RCA (yes/no)
333	Petroleum oils and oils obtained from bituminous minerals, crude	5,856,684,441	14,814,520,938	6.86	Yes
422	Fixed vegetable fats and oils, crude, refined or fractionated, other than "soft"	4,674,189,045	14,814,520,938	149.20	Yes
512	Alcohols, phenols, phenol-alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives	684,206,269	14,814,520,938	16.54	Yes
634	Veneers, plywood, particle board and other wood, worked, n.e.s.	373,926,166	14,814,520,938	12.88	Yes
671	Pig-iron, spiegeleisen, sponge iron, iron or steel granules and powders and ferro-alloys	253,474,905	14,814,520,938	9.36	Yes
723	Civil engineering and contractor's plant and equipment; parts thereof	161,508,345	14,814,520,938	1.93	Yes
036	Crustaceans, molluscs and aquatic invertebrates, whether in shell or not, fresh (live or dead), chilled, frozen, dried, salted or in brine; crustaceans in shell, cooked by steaming or boiling in water, whether or not chilled, frozen, dried, salted or in	157,102,453	14,814,520,938	5.44	Yes
081	Feeding stuff for animals (not including unmilled cereals)	139,531,598	14,814,520,938	2.16	Yes
874	Measuring, checking, analysing and controlling instruments and apparatus, n.e.s.	113,236,786	14,814,520,938	0.76	No
641	Paper and paperboard	86,567,639	14,814,520,938	0.97	No
034	Fish, fresh (live or dead), chilled or frozen	80,964,424	14,814,520,938	1.69	Yes
781	Motor cars and other motor vehicles principally designed for the transport of persons (other than motor vehicles for the transport of ten or more persons including the driver) including station-wagons and racing cars	72,982,429	14,814,520,938	0.14	No

Table 4: Continue

3DC	Product	Sabah export (in US'000)	Sabah total export	RCA index	RCA (yes/no)
231	Natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums in primary forms (including latex) or in plates, sheets or strip	70,253,992	14,814,520,938	5.62	Yes
679	Tubes, pipes and hollow profiles and tube or pipe fittings of iron or steel	65,556,023	14,814,520,938	0.92	No
728	Other machinery and equipment specialized for particular industries; parts thereof, n.e.s	56,448,960	14,814,520,938	0.40	No
251	Pulp and waste paper	49,138,108	14,814,520,938	1.42	Yes
598	Miscellaneous chemical products, n.e.s.	49,026,430	14,814,520,938	0.49	Yes
282	Ferrous waste and scrap; remelting scrap ingots of iron or steel	46,897,936	14,814,520,938	1.50	Yes
247	Wood in the rough, whether or not stripped of bark or sapwood or roughly squared	46,737,936	14,814,520,938	4.36	Yes
695	Tools for use in the hand or in machines	45,785,241	14,814,520,938	1.12	Yes

Table 5: Republic of Korea's RCA at 3 Digit Code (3 DC)

3DC	Product	Korea export (in US'000)	Korea total export (in US'000)	RCA index	RCA (yes/no)
776	Thermionic, cold cathode or photo-cathode valves and tubes (e.g., vacuum or vapour or gas-filled valves and tubes, mercury arc rectifying valves and tubes, cathode-ray tubes, television camera tubes); diodes, transistors and similar semiconductor devices	56,719,578.4	573,074,773.1	3.19	Yes
334	Petroleum oils and oils obtained from bituminous minerals (other than crude); preparations, n.e.s., containing by weight 70% or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic constituents of the preparation	49,097,847.3	573,074,773.1	1.75	Yes
781	Motor cars and other motor vehicles principally designed for the transport of persons (other than motor vehicles for the transport of ten or more persons including the driver) including station-wagons and racing cars	44,816,384.7	573,074,773.1	2.14	Yes
793	Ships, boats (including hovercraft) and floating structures	38,339,918.3	573,074,773.1	9.65	Yes
764	Telecommunications equipment, n.e.s. and parts, n.e.s. and accessories of apparatus falling within division 76	36,906,963.7	573,074,773.1	1.87	Yes
871	Optical instruments and apparatus, n.e.s.	24,932,176.1	573,074,773.1	8.46	Yes
784	Parts and accessories of the motor vehicles of groups 722, 781, 782 and 783	24,315,212.9	573,074,773.1	2.14	Yes
778	Electrical machinery and apparatus, n.e.s.	17,425,840.1	573,074,773.1	2.43	Yes
511	Hydrocarbons, n.e.s. and their halogenated, sulphonated, nitrated or nitrosated derivatives	14,371,553.1	573,074,773.1	5.19	Yes
772	Electrical apparatus for switching or protecting electrical circuits or for making connections to or in electrical circuits (e.g., switches, relays, fuses, lightning arresters, voltage limiters, surge suppressors, plugs and sockets, lamp-holders and junct	12,448,410.8	573,074,773.1	1.64	Yes
728	Other machinery and equipment specialized for particular industries; parts thereof, n.e.s.	9,907,312.9	573,074,773.1	1.83	Yes
673	Flat-rolled products of iron or non-alloy steel not clad, plated or coated	8,931,873.5	573,074,773.1	4.18	Yes
575	Other plastics in primary forms	8,418,512.7	573,074,773.1	2.34	Yes
674	Flat-rolled products of iron or non-alloy steel, clad, plated or coated	6,020,282.9	573,074,773.1	0.21	No
723	Civil engineering and contractor's plant and equipment; parts thereof	5,970,294.7	573,074,773.1	1.84	Yes
759	Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines falling withing groups 751 and 752	5,782,525.4	573,074,773.1	1.49	Yes
582	Plates, sheets, film, foil and strip, of plastics	5,700,865.2	573,074,773.1	1.83	Yes

Table 5: Continue

3DC	Product	Korea export (in US'000)	Korea total export (in US'000)	RCA index	RCA (yes/no)
713	Internal combustion piston engines and parts thereof, n.e.s.	5,316,371.9	573,074,773.1	1.05	Yes
679	Tubes, pipes and hollow profiles and tube or pipe fittings, of iron or steel	5,251,017.8	573,074,773.1	1.9	Yes
574	Polyacetals, other polyethers and epoxide resins in primary forms; polycarbonates, alkyd resins, polyallyl esters and other polyesters in primary forms	4,998,288.4	573,074,773.1	2.99	Yes

Table 2 shows that at one digit level, Sabah has revealed comparative advantage in producing (SITC-2) and (SITC-3). Table 3 shows that Republic of Korea has revealed comparative advantage in producing (SITC-5) (SITC-6) and (SITC-7). This shows that both has different revealed comparative advantage in producing products for exports at one digit level.

Based on Table 4, Sabah has comparative advantage in producing 15 out of 20 of its most important export products in 2014. Table 5 shows that Republic of Korea actually has revealed comparative advantage in producing 19 out of 20 of its main export products to the world.

This study suggests that to further strengthen bilateral relations, both shall increase its export to and import from each other by looking into product categories where the trade counterpart has revealed comparative advantage in. This will make bilateral trade more meaningful where import is made based on the niche of each country. In addition, each country can further specialize on product categories where it has revealed comparative in and export those products to its trading counterpart.

CONCLUSION

The niche of Sabah and Korea trade sectors are to be identified by computing the revealed comparative advantage index. Moreover, this study proposes policy recommendations to further strengthen and sustain Sabah-Korea bilateral trade relations.

RECOMMENDATIONS

Given the scenario discussed earlier, the study suggests the followings: the establishment of specific unit within MATRADE office in Korea to focus on the handling of export promotion activities for Sabah's products. This may increase participation of Sabah's exporters in any Korean trade exhibitions/expos. More business matching activities can be done between exporters from Sabah and importers from Korea. Consequently, export from Sabah to Korea shall rise. Emphasis should also be given on products where Sabah has comparative advantage in.

The establishment of Sapangar Port Promoting Agency. This agency shall play its role to promote in South Korea to attract Korea's main shipping liner to berth at Sapangar Port. The port promotion agency should play role in attracting main shipping liners in Korea to berth in Sapangar. This can be done by allowing/offering big corporations to have dock yards or regional warehouse in Sapangar considering the plan of making Sapangar Port as Port Transhipment Hub. This will eventually increase cargo traffic in Sapangar, hence increasing Sabah's export due to re-export activities.

Propose Malaysia's relevant agency or department to form an investment promotion unit in Korea to attract investor from Korea to invest in Sabah in the form of foreign direct investment. This can be done by identifying Korea's niche industry and attract investors to invest in Sabah. Identification of sectors where Sabah has comparative advantage in can be made to propose Korean investors, industries where they can invest in.

The establishment of free trade zone in Kota Kinabalu Industrial Park (KKIP) in total or for strategic partners like Republic of Korea. This will be a complement to Sapangar port, a port that will be transformed to a port transhipment hub. In addition, this may attract more foreign direct investment inflow into Sabah where it is hoped that there will be opening ups of factories and manufacturing plant in KKIP. This eventually will add impetus for transhipment activities that will boost Sabah's trade in general and with Korea in specific.

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