



## VIETNAM-KOREA BILATERAL TRADE: CURRENT SITUATION AND PROSPECTS

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**Abstract:** Vietnam-Korea relation has been rapidly deepened in all fields, especially trade and investment since the establishment of diplomatic ties between the two countries in 1992. This paper analyses the patterns and trends in the trade relations between Viet Nam and Korea over the past twenty years. Various trade indices such as trade intensity, trade complementarities, intra-industry and revealed comparative advantages were used to describe the structure and composition in the Vietnam-Korea bilateral trade. The study results show that the predominant trade pattern between Vietnam and Korea is inter-industry trade and complementary. The main findings also suggest that there is significant potential for further growth of trade between the two countries.

**JEL code:** F10, F13, F14

**Keywords:** bilateral trade, trade pattern, intra-industry trade, revealed comparative advantage, Korea, Vietnam

### 1 Introduction

Vietnam-Korea relation has developed considerably since the establishment of diplomatic ties between the two countries in 1992. The relationship has been rapidly deepened in all fields such as political and economic, social and cultural, trade and investment, education and people-to-people exchanges. During a short period of two decades, there was great progress in the bilateral relations. The trade volumes increased 74 folds from about US\$ 500 million in 1992 to approximately US\$ 37 billion in 2015. The average annual growth rate of Vietnam's imports from Korea was about 25 percent, whereas Vietnam's exports to Korea increased at an average growth rate of nearly 19 percent per annum during the period 1992-2015 (table 2). Korea has been one of Vietnam's top trading partners since 1992; specifically it is the second largest import market and fourth largest export market for Vietnam. Vietnam is Korea's fourth largest export market in 2015. It is also one of Korea's largest export markets for industrial goods. On the other hand, although Korea's trade share is declining, it has maintained its position as Vietnam's top 10 trading partner over the past 20 years (UNSD, 2015). In an effort to improve the strategic partnership established between the two countries, the trade ministers of Vietnam and Korea signed a free-trade agreement (FTA) on May 5<sup>th</sup>, 2015. Both sides hoped that the bilateral trade volume would reach US\$ 70 billion by 2020 (VCCI, 2016).

The bilateral trade relationship between Korea and Vietnam reflects the complementary of both countries' natural advantages. Vietnam is a competitive, efficient and rich country in terms of labor, and natural resources, while Korea is renowned for its ability to produce competitive high-tech goods and services. Vietnam's exports to Korea are concentrated on

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primary goods; Korea's exports to Vietnam are meanwhile predominated by elaborately transformed manufactures. Thus, it is of interest to investigate trades between the two countries comprehensively by reviewing trade relations and applying trade pattern indices such as Trade Intensity Index, Trade Complementarity Index, and Intra Industry Trade Index.

This paper outlines the major characteristics of Vietnam-Korea trade relations; specifically, to determine whether the two countries' trade is complementary or competitive, whether or not there have been changes in trade composition, and which products have dominated the trade and enjoyed a comparative advantage. The study uses the main indices to assess trade performance both at the aggregate level and at the industry level; to analyze and display data on the sectoral composition and structural characteristics of trade, such as intra-industry trade and trade intensity, and to capture the concept of comparative advantage, indicated by revealed comparative advantage index. Based on the findings, the paper suggests the directions for developing the bilateral trade relations between the two countries.

This paper consists of the following sections: Section II presents the overview of Vietnam-Korea economic relationship; Section III discusses the trend and structure of the two countries' trade; Section IV provides the methodology and theoretical background of analysing bilateral trades; Section V presents an insights analysis of trade patterns between the two countries using various trade indices; Section VI summarises the main findings and suggests directions for policy implications.

## 2 Vietnam-Korea economic relationship

During a short period of two decades, there was great progress in bilateral relations. Trade volumes increased dramatically from about US\$ 500 million in 1992 to US\$ 36.790 billion in 2015. Korea has been one of Vietnam's top trading partners since 1992; specifically, Korea is Vietnam's third largest trading partner after China and the United States. Vietnam was Korea's fourth largest export market in 2015. Korean investment in Vietnam has also increased substantially. By 2015, Korea became the biggest foreign investor in Vietnam (VCCI, 2016) with foreign direct investment (FDI) amounts of registered capital of around US\$ 44 billion in 3,197 projects (table 1).

Bilateral economic relations between Korea and Vietnam have attained fast development thanks to their geographic proximity, cultural similarities, and complementary economic structures. In particular, the active efforts of Korean government to support Vietnam to improve economic infrastructure and investment environment in the country as well as to establish a solid foundation for mutually beneficial cooperation through the Official Development Assistance (ODA) to Vietnam have enhanced such relations between the two countries. So far, Korea has been Vietnam's second largest ODA donor country. The cultural and people-to-people exchanges between Vietnam and Korea have been continuously promoted. There are over 130,000 Vietnamese people working, studying and living in Korea and almost the same number of Korean people in Vietnam. With several similarities in culture and history, the amicable bonds between the two countries are increasingly strengthened.

**Table 1.** Vietnam – Korea relationship: Main Indicators, 2015

|             | Unit         | Korea to Vietnam | Vietnam to Korea |
|-------------|--------------|------------------|------------------|
| Total trade | US\$ million | 36,790           | 36,790           |
| Export      | US\$ million | 27,790           | 9,000            |
| Trade share | %            | 9.51             | 2.03             |
| Investment  |              |                  |                  |
| FDI         | US\$ million | 43,920           | 3.2              |
| ODA         | US\$ million | 2,670            | -                |
| Visitors    | person       | 1,110,000        | 170,000          |
| Residents   | person       | 140,000          | 130,000          |

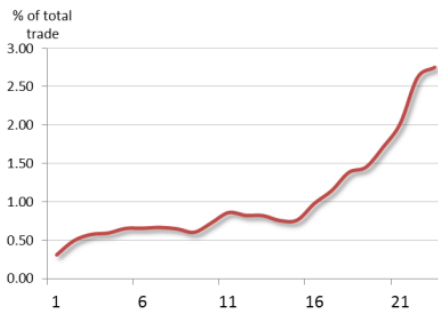
Source: Korea International Trade Association – KITA, 2016  
Korean Ministry of Foreign Affairs and Trade, 2016

Korea has been one of Vietnam's top trading partners since 1992. The share of Vietnam's trade with Korea in Korea's total trade has increased rapidly over years, as shown in figure 1a. Although Korea's trade share declined, Korea has maintained its position as Vietnam's top 10 trading partner in the past 20 years (figure 1b). Except for the period during the Asian financial crisis, the trade volume between the two countries has increased rapidly, which is about 19% annually on average (Table 2). The scale of bilateral trade relations has deepened further since 2007 when the Korea-ASEAN Free Trade Agreement (merchandise) went into effect. In terms of volume, Vietnam's exports to Korea rose from only US\$ 57.3 million in 1992 to US\$ 7,167.5 million in 2014, while its imports from Korea increased dramatically from US\$ 436.2 million to US\$ 21,728.5 million in the corresponding period.

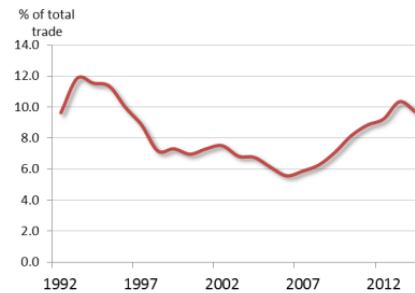
**Table 2.** Vietnam-Korea Bilateral Trade Volume and Growth: 1992-2014

| Year    | Export (US\$ mil) | Inc. Rate (%) | Import (US\$ mil) | Inc. Rate (%) |
|---------|-------------------|---------------|-------------------|---------------|
| 1992    | 57.3              | 39.32         | 436.2             | 119.25        |
| 1995    | 193.6             | 70.16         | 1,351.0           | 31.50         |
| 2000    | 322.4             | 22.03         | 1,686.0           | 16.67         |
| 2005    | 694.0             | 3.08          | 3,431.7           | 5.41          |
| 2010    | 3,330.8           | 40.54         | 9,652.1           | 35.00         |
| 2014    | 7,167.5           | 7.25          | 21,728.5          | 5.08          |
| Average |                   | 24.55         |                   | 19.44         |

Source: UN Comtrade database, 2015



**Fig. 1a.** Vietnam's Trade Shares in Korea's Trade (%)



**Fig. 1b.** Korea's Trade Shares in Vietnam's Trade (%)

Source: UN Comtrade database, 2015

### 3 Vietnam-Korea Trade: Trend and Structure

In terms of trade structures, overall, Korea's exports to and imports from Vietnam are reflective of normal trade patterns between a developed and a developing country. Almost all Korean exports to Vietnam are manufactured goods (HS chapters 28-40; 50-63; 72-85), accounting for more than 80% in 2014. The composition of bilateral trades is shown in Table 3. The reported data show that machinery, textile, and mineral products are major export and import products of Vietnam. These items account for about 54%, 41%, and 26% of Vietnam's export and import, respectively. For manufacture trade, electrical, metal, and textile products account for above 50% of Vietnam's imports from Korea. These sectors also show a big deficit in the two countries' trade.

It is obvious that while the total trade volume between the two increased significantly over the past decades, the commodities trade remained virtually unchanged (Figure 2). The data show that Korea's major export items to Vietnam continued to consist of capital goods and raw/subsidiary materials such as machinery, steel/metal products, and industrial textiles, whereas Vietnam principally exported primary products such as agricultural and fishery products and consumer textiles over the past decade. This is a typical inter-industry trade pattern between a developed country and a developing country. This trade pattern will be specifically examined in the following sections.

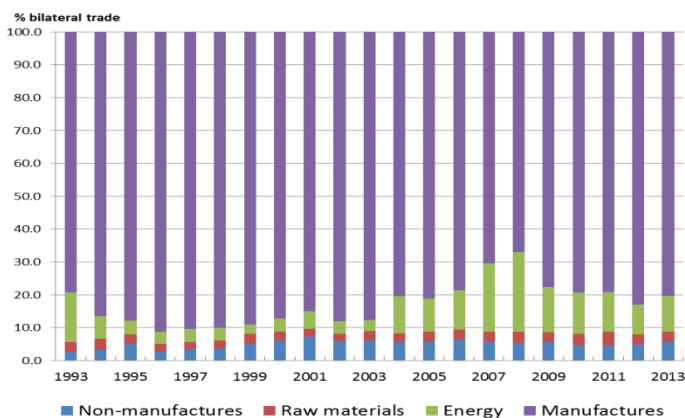


Fig. 2. Bilateral Trade Shares by category

Table 3. Vietnam's Trade with Korea by Sector in 2014

| Sector                | HS Code | Exports (US\$ million) | Share (%)     | Imports (US\$ million) | Share (%)     | Balance (US\$ million) |
|-----------------------|---------|------------------------|---------------|------------------------|---------------|------------------------|
| Animal Products       | 01-05   | 504.4                  | 6.70          | 121.3                  | 0.54          | 383.2                  |
| Vegetable Products    | 06-15   | 301.5                  | 4.00          | 14.8                   | 0.07          | 286.6                  |
| Foodstuffs            | 16-24   | 231.2                  | 3.07          | 79.6                   | 0.36          | 151.7                  |
| Mineral Products      | 25-27   | 363.9                  | 4.83          | 675.1                  | 3.01          | (311.1)                |
| Chemicals             | 28-38   | 119.5                  | 1.59          | 1,051.4                | 4.69          | (931.9)                |
| Plastics/Rubbers      | 39-40   | 170.3                  | 2.26          | 2,293.5                | 10.24         | (2,123.2)              |
| Leather & Fur         | 41-43   | 92.5                   | 1.23          | 243.6                  | 1.09          | (151.2)                |
| Wood Products         | 44-49   | 351.4                  | 4.67          | 216.3                  | 0.97          | 135.1                  |
| Textiles              | 50-63   | 2,477.2                | 32.89         | 2,388.0                | 10.66         | 89.2                   |
| Footwear/Headgear     | 64-67   | 345.7                  | 4.59          | 52.5                   | 0.23          | 293.2                  |
| Stone/Glass           | 68-71   | 62.2                   | 0.83          | 98.1                   | 0.44          | (35.8)                 |
| Metals                | 72-83   | 379.9                  | 5.04          | 3,073.1                | 13.72         | (2,693.2)              |
| Machinery/Electricals | 84-85   | 1,290.6                | 17.14         | 10,093.4               | 45.05         | (8,802.9)              |
| Transportation        | 86-89   | 105.0                  | 1.39          | 583.5                  | 2.60          | (478.5)                |
| Miscellaneous         | 90-97   | 372.2                  | 4.94          | 744.5                  | 3.32          | (372.3)                |
| <b>Total</b>          |         | <b>7,531.4</b>         | <b>100.00</b> | <b>22,403.5</b>        | <b>100.00</b> | <b>(14,872.1)</b>      |

Source: UN Comtrade database, 2016

## 4 Methodology and data sources

The aim of this paper is to analyse bilateral trades between the two countries comprehensively by reviewing trade relations and applying trade pattern indices. The analysis uses various trade indices introduced in *A Practical Guide to Trade Policy Analysis* (WTO, 2012). A broad definition of a trade indicator is that it is an index or a ratio which can be used to describe and assess the state of trade flows and trade patterns of a particular country or countries and can be used to monitor these flows and patterns over time or across countries. Indicators can and should be used towards evidence-based policy making (Scott, 2005). For this purposes, this study employs the following indicators<sup>1</sup>:

### *Trade intensity index - TII*

Trade intensity index – TII (export, import) measures the strength of bilateral trade flows and is used to determine whether trade between the two countries is greater or smaller than what would be expected on the basis of their share in world trade. The export/import intensity index takes the ratio of an export/import share for a country to the corresponding export share of the world as a whole.

### *Intra-industry trade - IIT*

The intra-industry trade (IIT) is generally defined as the simultaneous export and import of goods in the same industry. Instead of specialization in an entire industry or activity, that is, inter-industry specialization, intra-industry specialization involves a country specializing in a narrow range of products within a given industry or in other words, IIT represents a simultaneous movement towards specialization in separate differentiated goods and achieves economies of scale in production of an industry.

In order to distinguish IIT into its vertical (VIIT) and horizontal (HIIT) components, existing literature shows the consistency in methodology which is based on the assumption that the difference in unit cost of export and import reflects the quality difference in goods of export and import between trading partners. Thus, this study uses the ratio of unit value (UV) of export and import as the proxies for product differentiation. Export (import) unit values are obtained by dividing the value of total exports (imports) to total amounts of exports (imports). IIT is considered as horizontal if the export and import values differ by less than  $\alpha$  % (15, 25, i.e.) if they fulfill the following condition

$$1 - \alpha \leq \frac{UV_i^x}{UV_i^m} \leq 1 + \alpha$$

Vertical IIT then is defined as

$$1 - \alpha \leq \frac{UV_i^x}{UV_i^m} \leq 1 + \alpha$$

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<sup>1</sup> See WTO (2012) for the calculation of indices

The reason of using  $\alpha$  percent in the calculations is that the transaction costs are estimated to constitute approximately  $\alpha$  percent of the product prices.

#### *Trade complementarity index - TCI*

The trade complementarity index (TCI) is a type of overlap index. It measures the degree to which the export pattern of one country matches the import pattern of another. A high degree of complementarity is assumed to indicate more favorable prospects for a successful trade arrangement. The TCI ranges between 0 and 1. It takes value 0 when there is no compatibility in trade flows between the two countries, that is, when there is no products that are exported from one country and imported by the other. On the other hand, the index takes value 1 when trade flows match perfectly, that is, when the export structure of one country is just the same as the import structure of the other. Changes over time may tell us whether the trade profiles are becoming more or less compatible.

#### *Revealed Comparative Advantages - RCA*

In the theories of international trade, comparative advantage is an important concept for explaining the pattern of trade. Comparative advantage underlies economists' explanations for the observed pattern of inter-industry trade. Revealed comparative advantage indices (RCA) use the trade pattern to identify the sectors in which an economy has a comparative advantage, by comparing the country-of-interest trade profile with the world average. This study uses the Balassa (1965) measure of computing the RCA index, a ratio of product  $k$ 's share in country  $i$ 's exports to its share in world trade. Thus, when the product's share in national exports is higher than the product's share in the world exports ( $RCA > 1$ ), we interpret it as the country revealed comparative advantage in this particular product. In contrast, for products whose  $RCA < 1$ , the country is said to reveal comparative disadvantage.

The principal data source in this study is the United Nations Commodity Trade Statistics Database (UN-COMTRADE), which reports detailed bilateral export and import data. The database is regularly updated and includes information for over 170 countries, some of which have been reporting these types of statistics to the United Nations since 1962. The data are recorded according to various internationally recognized trade classifications.

## **5 Results and discussion**

This section provides the results from application of trade indices which reveal changes in commodity structure and pattern of trade, including trade intensity, intra-industry trade, trade complementarity, and revealed comparative advantages. These indices are useful for the preparation of negotiating positions in trade negotiations as well as for formulation of development strategies, as they reflect directly or indirectly the competitive ability of a country's economic sectors or activities.

#### *Trade intensity index (TII)*

Figure 3 shows the export intensity of the two countries in the period of 2000 - 2014. As shown in Figure 3, Korea's export intensity with Vietnam was extremely high in this period though there was a decreasing trend over time. This implies that Korea's exports to Vietnam grew much higher than that to the rest of the world. Vietnam's export intensity with Korea

hovered around unity, which indicates that the growth rate of Vietnam's exports to Korea is similar to that of the rest of the world. Overall, the bilateral trade between Korea and Vietnam has been less intense than the respective trade of Korea and Vietnam with other countries in recent years.



Fig. 3. Vietnam – Korea Trade Intensity Index

Source: UN Comtrade data, 2016

#### *Intra – industry Trade index (IIT)*

The intra-industry trade results of Vietnam-Korea trade are shown in Table 4. First of all, the two countries' trade was divided into one-way trade and two-way trade with their shares, as summarized in Table 4. From 2000 to 2014, two-way trade increased dramatically, indicated by both the number of traded product and trade share. In 2014, two-way trade accounted for about 89 percent of the total bilateral trade with 1,955 out of 3,726 product groups. This implies the significant trade expansion as well as trade diversification between the two countries in the past two decades.

Table 4. Summary of Vietnam-Korea Trade by Product Groups

| Year | Total traded product groups | One-way trade  |                      | Two-way trade  |                      |
|------|-----------------------------|----------------|----------------------|----------------|----------------------|
|      |                             | No of products | % of the total trade | No of products | % of the total trade |
| 2000 | 2,357                       | 1,814          | 45.75                | 543            | 54.25                |
| 2005 | 2,937                       | 2,020          | 24.28                | 917            | 75.72                |
| 2010 | 3,441                       | 1,957          | 23.82                | 1,484          | 76.18                |
| 2014 | 3,726                       | 1,771          | 10.70                | 1,955          | 89.30                |

Source: UN Comtrade data, HS 1996 at 6-digit level, 2016

The Intra-industry trade levels IIT, VIIT and HIIT for Vietnam-Korea bilateral trade in the period of 1995-2014 are reported in Table 5. These indices are calculated from HS 6-digit trade data and  $\alpha = 25\%$ . The result shows the remarkable changing trend in VIIT and HIIT in the corresponding period. Between 1995 and 2014, the share of VIIT increased from 20.45 percent to



61.52 percent, meanwhile the share of trade in horizontally differentiated products (HIIT) increased considerably from around 11 percent to nearly 28 percent. This indicates an improvement in Vietnam's trade, specifically exports, in terms of product's diversification and technology changes.

**Table 5.**Intra-industry Trade Levels in the Period of 2000-2014

| Year | Intra-industry Trade (US\$ million & percent) |       |         |       |         |       |
|------|---|-------|---------|-------|---------|-------|
|      | VIIT  | Share | HIIT    | Share | Other   | Share |
| 1995 | 315.9   | 20.45 | 170.7   | 11.05 | 1,057.9 | 68.50 |
| 2000 | 776.7   | 38.67 | 312.4   | 15.55 | 919.4   | 45.78 |
| 2005 | 2,221.2                                       | 53.84 | 902.5   | 21.88 | 1,002.0 | 24.29 |
| 2010 | 6,943.1                                       | 53.48 | 2,923.2 | 22.52 | 3,116.6 | 24.01 |
| 2014 | 18,655.3                                      | 61.52 | 8,414.2 | 27.75 | 3,252.1 | 10.73 |

Source: UN Comtrade data, HS 1996 at 6-digit level, 2016

#### *Trade complementarity index (TCI)*

The TCI for Vietnam-Korea trade during the period 2000–2014 is shown in Table 6. The results of TCI indicate that the bilateral trade between Korea and Vietnam is highly complementary. Taking Vietnam as the importer, TCI is higher than that of as the exporter. This means that Vietnam's import structure is compatible with Korea's export structure. On the other hand, lower TCI values when taking Korea as the importer means Vietnam's export structure is not highly compatible with Korea's import structures.

**Table 6.**Trade Complementarity Index

|               | 2000  | 2002  | 2004  | 2006  | 2008  | 2010  | 2012  | 2014  |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Korea-Vietnam | 46.11 | 45.62 | 47.23 | 50.21 | 50.66 | 46.39 | 49.56 | 49.26 |
| Vietnam-Korea | 61.67 | 60.46 | 57.57 | 57.59 | 61.22 | 61.86 | 70.65 | 71.23 |

Source: UN Comtrade data, 2016

#### *Revealed Comparative Advantages - RCA*

In order to assess whether Vietnam-Korea bilateral trade is consistent with the comparative advantage principle, or whether Vietnam-Korea trade is complementary or competitive in nature, we formulated the Revealed Comparative Advantage (RCA – see WTO 2012) for the two countries in the year 2014. Table 7 summarizes the RCA profiles of Vietnam (RCA<sub>V</sub>) and Korea (RCA<sub>K</sub>) at HS 6-digit level according to the 15 HS sections. Starting at the left-hand data column, it is evident that nearly all sectors contain 6-digit HS codes for which both Vietnam and Korea appear to hold a comparative advantage (RCA<sub>V</sub> and RCA<sub>K</sub> > 1). However, the number of codes for which both areas' RCAs are greater than 1 is far smaller than the number of codes in which neither Vietnam nor Korea have a comparative advantage, as indicated in the second

data column. The third data column shows the number of codes for which Vietnam has RCAs greater than one, but Korea does not. Among these 5,251 codes, Vietnam has a comparative advantage against Korea mostly in chemical, textile, and machinery/electrical section. However, these sections also contain a significant amount of codes for which Vietnam's RCA is less than one, but Korea's RCA is greater than one, as shown in the last column. This indicates a big range of overlap RCAs between the two countries, and implies that the intra-industry has been more intense when Vietnam-Korea FTA entered into effect.

**Table 7.** Summary of RCA in Vietnam and Korea exports (2014)

| Sector                | HS Code | RCA <sub>V</sub> and<br>RCA <sub>K</sub> > 1 | RCA <sub>V</sub> and<br>RCA <sub>K</sub> < 1 | RCA <sub>V</sub> > 1,<br>RCA <sub>K</sub> < 1 | RCA <sub>V</sub> < 1,<br>RCA <sub>K</sub> > 1 |
|-----------------------|---------|--|--|---|---|
| Animal Products       | 01-05   | 76   | 596  | 370   | 302   |
| Vegetable Products    | 06-15   | 71   | 633  | 409   | 1,077   |
| Foodstuffs            | 16-24   | 49   | 373  | 238   | 184   |
| Mineral Products      | 25-27   | 32   | 264  | 160   | 136   |
| Chemicals             | 28-38   | 157  | 1,417  | 700   | 874   |
| Plastics/Rubbers      | 39-40   | 96   | 326  | 177   | 245   |
| Leather & Fur         | 41-43   | 29   | 109  | 86  | 52  |
| Wood Products         | 44-49   | 54   | 416  | 265   | 205   |
| Textiles              | 50-63   | 414  | 1,178  | 950   | 642   |
| Footwear/Headgear     | 64-67   | 29   | 65   | 68  | 26  |
| Stone/Glass           | 68-71   | 36   | 350  | 197   | 189   |
| Metals                | 72-83   | 241  | 885  | 470   | 656   |
| Machinery/Electricals | 84-85   | 248  | 1,294  | 663   | 879   |
| Transportation        | 86-89   | 43   | 217  | 121   | 139   |
| Miscellaneous         | 90-97   | 107  | 601  | 377   | 331   |
| <b>Total</b>          |         | <b>1,682</b>                                 | <b>8,724</b>                                 | <b>5,251</b>                                  | <b>5,937</b>                                  |

*Source: UN Comtrade data, 2016*

The sectors that both Korea and Vietnam have a comparative disadvantage are candidates for trade diversion because duty reduction in these codes could enable exports from Vietnam to Korea (or vice versa) to increase at the expense of a country that lacks a comparative advantage. The information of RCA's analysis indicates that the structure of the bilateral trade between Korea and Vietnam is complementary rather than competitive, as each country has a very different comparative advantage.

Above are the comparative advantages of the two countries' export in the world market. In order to assess the comparative advantages of Vietnam's exports in Korean market, the

revealed comparative advantage was calculated for all sectors over the period of 2000 - 2014. The results of RCA for Vietnam exports are shown in Table 8.

**Table 8.** RCA in Vietnam exports to Korea over the period of 2000-2014

*Value unit: US\$ million*

| Sector                | HS Code | 2000  |       | 2005  |       | 2010  |      | 2014    |       |
|-----------------------|---------|-------|-------|-------|-------|-------|------|---------|-------|
|                       |         | Value | RCA   | Value | RCA   | Value | RCA  | Value   | RCA   |
| Animal Products       | 01-05   | 70.6  | 10.17 | 135.0 | 11.74 | 314.1 | 5.74 | 504.4   | 3.28  |
| Vegetable Products    | 06-15   | 30.0  | 4.35  | 44.6  | 3.9   | 90.3  | 1.41 | 301.5   | 1.94  |
| Foodstuffs            | 16-24   | 3.6   | 0.68  | 33.6  | 3.61  | 113.0 | 2.28 | 231.2   | 1.65  |
| Mineral Products      | 25-27   | 1.0   | 0.07  | 62.8  | 0.45  | 763.0 | 0.17 | 363.9   | 0.1   |
| Chemicals             | 28-38   | 3.9   | 0.13  | 8.8   | 0.15  | 44.9  | 0.16 | 119.5   | 0.2   |
| Plastics/Rubbers      | 39-40   | 11.8  | 1.33  | 47.9  | 2.45  | 134.6 | 1.23 | 170.4   | 0.82  |
| Leather & Fur         | 41-43   | 9.8   | 2.14  | 12.5  | 2.27  | 35.0  | 1.46 | 92.5    | 1.49  |
| Wood Products         | 44-49   | 16.2  | 1.71  | 15.0  | 1.27  | 90.2  | 1.8  | 353.5   | 3.27  |
| Textiles              | 50-63   | 92.5  | 6.27  | 136.0 | 6.25  | 806.9 | 9.21 | 2,477.2 | 10.02 |
| Footwear/Headgear     | 64-67   | 43.5  | 42.37 | 30.7  | 14.33 | 98.3  | 8.85 | 345.7   | 7.89  |
| Stone/Glass           | 68-71   | 7.0   | 0.85  | 20.1  | 1.53  | 18.4  | 0.25 | 62.2    | 0.43  |
| Metals                | 72-83   | 0.8   | 0.03  | 8.4   | 0.11  | 188.0 | 0.51 | 379.9   | 0.56  |
| Machinery/Electricals | 84-85   | 31.3  | 0.22  | 59.2  | 0.28  | 262.0 | 0.28 | 1,290.2 | 0.64  |
| Transportation        | 86-89   | 0.2   | 0.01  | 0.5   | 0.02  | 16.0  | 0.13 | 105.0   | 0.35  |
| Miscellaneous         | 90-97   | 30.3  | 1.11  | 48.3  | 0.98  | 117.4 | 0.51 | 370.3   | 0.6   |

*Source: UN Comtrade data, 2016*

As shown in Table 8, the RCA of product groups which Vietnam has a comparative advantage against Korea such as Animal Products; Vegetable Products; Foodstuffs; Mineral Products; and Footwear/Headgear decreased significantly over time, although it accounted for a small share of the total traded products. This indicates there was a strong competition from other Korea's trading partners, i.e, ASEAN members. By contrast, two major export items of Vietnam (Textiles and Machinery/Electricals) showed an increase in RCA, from 6.27 to 10.02, and 0.22 to 0.64, respectively, in the period of 2000-2014.

## 6 Conclusion and Implications

This paper investigates two major issues in Vietnam-Korea trade relations: current situation and possible implications for their future trade relations. The main findings can be summarised as follows:

First of all, Korea has been the most important trading partner for Vietnam for the last 20 years. Meanwhile, Vietnam's trade with Korea has been significantly growing as Vietnam is now in the top 10 export markets for Korea. In terms of trade balance, Korea has so far maintained a trade surplus over Vietnam.

Secondly, the commodity trade structure between Korea and Vietnam remains somewhat unchanged, even though the bilateral trade between the two has expanded significantly over the past decades. Korea predominantly exports manufactured goods to Vietnam while its imports from Vietnam are concentrated on primary goods. For trade intensity, export and import intensity indices indicate a strong export relationship for Korea with Vietnam, while the import intensity of goods from the Vietnam is lower than expected.

Thirdly, Vietnam-Korea bilateral trade is primarily inter-industry trade. The low levels of IIT over the investigated period indicate that the traditional factor endowment theory still holds true for Vietnam-Korea trade. This result also confirms the trade pattern of developing and developed countries.

Lastly, regarding competitiveness of trade, the results of the global and bilateral RCA show that Korea possesses a strong revealed comparative advantage in manufactured products and machinery and transport equipment. Vietnam, on the other hand, enjoys a comparative advantage largely in either primary products or low-technology manufactures. This result is also consistent with the information of trade complementarity index as trade between the two countries is complementary rather than competitive.

The existing composition and pattern of trade between the two countries confirm what we expected. The impetus of the freer trade with these two countries is clear. The trade relationship between Vietnam and Korea has gradually become intensive and stable, but further strength and development are needed. The findings of this section may serve as recommendations in a way that the usage of trade indices as an input into the process of evidence-based policymaking for policy makers to improve the bilateral trade between the two countries. Korea and Vietnam have signed a free trade agreement (VKFTA) between the two. Thus, the FTA will be a good opportunity to help Vietnam and Korea to enhance the economic relationship between the two countries.

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