

INDO-ASEAN TRADE RELATIONS: UNDERSTANDING THE COMPARATIVE ADVANTAGE SECTORS FOR INDIA BY USING BALASSA'S RCA INDEX

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Abstract

As the regionalization efforts of international trade gets widened primarily due to limited progress at the multilateral trade negotiations, India is making serious regional engagements to consolidate its trade positions. India ASEAN Free Trade Agreement (IAFTA) generated intense discussion on the economic impact on India's trade in goods particularly on certain agricultural sectors where the livelihood of large number of people were depended upon. As both regions aim to reduce their import duty on a majority of their traded products which will allow them to increase the market access of their products. There is a concern that India will not experience as great a benefit from the increase in market access to ASEAN nations as ASEAN will in India. India does not have the same kind of resources to offer ASEAN like China, so it will be in India's best interest to have a clear picture of where she stands in light of these new developments over the past decade. It is imperative to have a clear understanding of what the country's advantages are and where its disadvantages, hence this study aims to bring to light in what sectors India has advantage in trade and in what sectors India has a disadvantage in trade with ASEAN countries.

KEY WORDS: ASEAN, IAFTA, REVEALED COMPARATIVE ADVANTAGE INDEX, LOOK EAST POLICY

INTRODUCTION

The Association of Southeast Asian Nations (ASEAN) is a regional organization constituted by ten countries which promotes intergovernmental cooperation between its members, as well as globally. The ASEAN, formed on 8 August 1967 with five members, namely, Indonesia, Malaysia, the Philippines, Singapore and Thailand, have since expanded to include Brunei, Cambodia, Laos, Myanmar and Vietnam. The association seeks to facilitate economic, political, security, military, educational and socio-cultural integration amongst its members as well as other Asian countries. The ASEAN, which is involved in various international affairs, maintains a network of alliances around the world. As the first Asian regional community, it is often hailed as the 'Asian Miracle'.

India-ASEAN relationship evolved from the 'Look East Policy' enunciated in early 1990s which led India to become a Sectoral Partner of ASEAN in 1992, a Dialogue Partner in 1996 and a Summit-level Partner in 2002. The bilateral trade which grew at a rate of 11.2%, resulted in a gross increase in trade from US\$2.9 billion in 1993 to US\$12.1 billion by 2003. Leaders of India and the ASEAN signed the ASEAN-India

Framework Agreement on Comprehensive Economic Cooperation at the Second ASEAN-India Summit in 2003, which laid the ground work for the ASEAN-India Regional Trade and Investment Area (RTIA). By 2011, India and ASEAN had passed 10 sessions of ASEAN-India summits and it was estimated that the ASEAN-India trade grew by over 22% per annum since 2005.

The ASEAN-India Trade in Goods Agreement signed in August 2009 laid the foundations for one of the largest FTAs in the ASEAN-India Trade-in-Services and Investment agreement that came into force in 2015. A cumulative FDI inflow of US\$54.9 billion and an outflow of US\$38.6 billion was recorded over the period of 2007 to 2015, with Singapore being the primary contributor as well as the top recipient, followed by Indonesia, Malaysia, Thailand, Philippines, Vietnam and Myanmar. At the commemorative summit in 2012, annual trade stood at US\$75 billion, and the two sides expressed hope that it would hit US\$200 billion (\$261 billion) by 2020.

As of 2017, India's two-way trade with ASEAN now stood at approximately \$76 billion and India, also a part of the ASEAN-led Regional Comprehensive Economic Partnership (RCEP), which, if implemented, will cover almost 40 percent of the total world trade. The trade relationship between India and South East Asian Nations have continued to improve and developing at moderately a fast pace during last decade. Ideas have been developed to cultivate intraregional tourism, educational cooperation, and the potential of Indian diaspora in Southeast Asia.

STATEMENT OF THE PROBLEM

As both regions aim to reduce their import duty on a majority of their traded products which will allow them to increase the market access of their products. There is a concern that India will not experience as great a benefit from the increase in market access to ASEAN nations as ASEAN will in India. India does not have the same kind of resources to offer ASEAN like China, so it will be in India's best interest to have a clear picture of where she stands in light of these new developments over the past decade. It is imperative to have a clear understanding of what the country's advantages are and where its disadvantages, hence this study aims to bring to light in what sectors India has advantage in trade and in what sectors India has a disadvantage in trade with ASEAN countries.

OBJECTIVES OF THE STUDY

- To understand the sectors of comparative advantage for India, regard to India-ASEAN trade.

RESEARCH METHODOLOGY

The study is designed on a descriptive cum analytical study conducted based on secondary data obtained from published articles, research papers, as well as databases of various national and international organizations. The study uses Balassa's RCA index as its primary tool for analysis.

Sectoral Comparative Advantage Analysis

Following is a country wise analysis of Balassa RCA index. Data used is Export data from year 2002 to 2015. Product groups are formed on the basis of HS Classification 1988/92 at the 2-Digit. Data of goods at 4 stages of production, and of 16 major product groups are considered to get a general idea of the relative trade advantages between India and various ASEAN countries.

Singapore

Table 1

| Stage of Production | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capital goods | 0.24 | 0.19 | 0.15 | 0.14 | 0.19 | 0.29 | 0.27 | 0.31 | 0.2 | 0.17 | 0.23 | 0.16 | 0.21 | 0.25 |
| Consumer goods | 1.56 | 2.17 | 2.7 | 1.71 | 2.94 | 2.58 | 2.5 | 1.98 | 2.62 | 2.36 | 2.38 | 2.27 | 2.27 | 2.22 |
| Intermediate goods | 4.01 | 3.04 | 2.75 | 4.16 | 1.82 | 1.82 | 1.49 | 2.16 | 0.9 | 0.78 | 0.81 | 1.2 | 1.02 | 1.44 |
| Raw materials | 0.51 | 0.5 | 0.21 | 0.12 | 0.18 | 0.13 | 0.09 | 0.15 | 0.12 | 0.08 | 0.08 | 0.14 | 0.13 | 0.35 |
| Product Group | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Animal | 1.8 | 1.26 | 0.88 | 0.73 | 0.66 | 0.6 | 0.51 | 0.51 | 0.36 | 0.27 | 0.34 | 0.6 | 0.62 | 0.74 |
| Chemicals | 1.88 | 1.68 | 1.33 | 1.16 | 1.37 | 1.26 | 0.91 | 1.07 | 0.83 | 0.76 | 1.02 | 1.38 | 1.28 | 1.59 |
| Food Products | 1.24 | 1.25 | 0.62 | 0.5 | 0.52 | 0.65 | 0.52 | 0.63 | 0.5 | 0.39 | 0.46 | 0.65 | 0.58 | 1 |
| Footwear | 0.67 | 0.53 | 0.37 | 0.38 | 0.32 | 0.78 | 0.66 | 1 | 1.07 | 0.68 | 0.65 | 0.97 | 1.23 | 1.27 |
| Fuels | 0.97 | 2.22 | 2.88 | 1.49 | 2.9 | 2.49 | 2.19 | 1.88 | 2.65 | 2.31 | 2.2 | 2.08 | 2.05 | 2.34 |
| Hides and Skins | 1.58 | 1.28 | 1.07 | 0.67 | 0.82 | 0.68 | 0.4 | 0.46 | 0.35 | 0.21 | 0.25 | 0.3 | 0.32 | 0.4 |
| Mach and Elec | 0.25 | 0.17 | 0.13 | 0.11 | 0.16 | 0.24 | 0.25 | 0.27 | 0.17 | 0.11 | 0.12 | 0.14 | 0.18 | 0.2 |
| Metals | 4.26 | 2.76 | 2.51 | 1.68 | 2.05 | 2.04 | 1.33 | 1.94 | 0.75 | 0.68 | 0.53 | 0.8 | 0.6 | 1.58 |
| Minerals | 2.82 | 3.99 | 1.99 | 1.63 | 1.53 | 0.81 | 0.83 | 0.5 | 0.68 | 0.51 | 0.64 | 0.32 | 0.37 | 0.38 |
| Miscellaneous | 0.44 | 0.51 | 0.48 | 0.41 | 0.38 | 0.54 | 0.32 | 0.41 | 0.26 | 0.3 | 0.42 | 0.31 | 0.41 | 0.5 |
| Plastic or Rubber | 0.69 | 0.6 | 0.54 | 0.44 | 0.7 | 0.74 | 0.71 | 0.9 | 0.32 | 0.26 | 0.27 | 0.39 | 0.35 | 0.48 |
| Stone and Glass | 10.2 | 8.34 | 9.14 | 16.5 | 4.46 | 4.51 | 4.54 | 5.27 | 2.38 | 2.34 | 2.16 | 3.25 | 3.03 | 2.52 |
| Textiles and Clothing | 4.62 | 4.12 | 2.5 | 1.94 | 1.61 | 1.99 | 1.39 | 2.21 | 2.17 | 1.38 | 1.47 | 1.94 | 1.92 | 1.93 |
| Transportation | 0.09 | 0.08 | 0.05 | 0.15 | 0.23 | 0.15 | 0.23 | 0.36 | 0.41 | 0.44 | 0.83 | 0.1 | 0.16 | 0.27 |
| Vegetable | 4.38 | 2.83 | 2.2 | 1.53 | 1.67 | 1.5 | 1.2 | 1.81 | 1.31 | 0.92 | 1.13 | 2.1 | 2.28 | 2.53 |
| Wood | 0.52 | 0.46 | 0.31 | 0.27 | 0.2 | 0.14 | 0.25 | 0.4 | 0.29 | 0.15 | 0.2 | 0.35 | 0.46 | 0.49 |

Source: WITS

The RCA measures of bilateral trade between India and Singapore from the year 2002 to 2015 is shown in Table 1. At a glance it is possible to understand that the relative advantage for India on a stage of production basis lies in the category of intermediate goods in 2002. While consumer goods also show a marginal advantage in the case of consumer goods at an index value of 1.56, it pales in comparison to that of intermediate goods, at 4.01. At the same time, both capital goods as well as raw materials are seen to be an area of disadvantage for India as far as export to Singapore is concerned.

A gradual reduction in advantage can be observed over the years for intermediate goods, which resulted in a drop of RCA index from 4.01 in 2002 to 1.44 in 2015. The other three categories show a marginal improvement, both as an increase in relative advantage as well as reduction in relative disadvantage. Capital goods, though an extremely marginal increase of 0.01, is shown to have maintained its level of advantage over the years. Consumer goods show a clear trend of growth over the years, rising from 1.56 in 2002 to 2.22 by 2015. An

increase in relative disadvantage is observed in the case of raw material exports, which fell to 0.13 in 2014, but also shows signs of recovery, as it rose to 0.35 in 2015

Vietnam

Table 2

| Stage of Production | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capital goods | 0.22 | 0.36 | 0.22 | 0.24 | 0.41 | 0.59 | 0.54 | 0.29 | 0.27 | 0.36 | 0.22 | 0.22 | 0.31 | 0.38 |
| Consumer goods | 0.79 | 0.76 | 0.51 | 0.47 | 0.44 | 0.4 | 0.4 | 0.6 | 0.69 | 0.73 | 0.77 | 0.66 | 1.07 | 1.2 |
| Intermediate goods | 1.34 | 1.42 | 1.55 | 1.6 | 1.49 | 1.52 | 1.52 | 1.51 | 1.33 | 1.27 | 1.24 | 1.38 | 1.01 | 1.06 |
| Raw materials | 4.16 | 3.07 | 2.44 | 1.92 | 2.24 | 1.67 | 2.08 | 2.67 | 2.84 | 2.64 | 3.8 | 3.65 | 3.98 | 3.8 |
| Product Group | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Animal | 6.68 | 4.95 | 5.25 | 2.15 | 1.53 | 0.94 | 1.11 | 1.2 | 1.13 | 3.53 | 3.06 | 5.17 | 7.58 | 9.97 |
| Chemicals | 2.31 | 2.18 | 1.93 | 2.58 | 2.17 | 1.91 | 1.66 | 2.11 | 2.45 | 2.12 | 2.35 | 1.94 | 2.18 | 2.79 |
| Food Products | 6.67 | 5.52 | 8.8 | 9.75 | 10.4 | 12.6 | 12.5 | 8.08 | 6.42 | 6.76 | 4.3 | 3.66 | 1.66 | 1.76 |
| Footwear | 0.06 | 0.07 | 0.05 | 0.1 | 0.13 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.12 | 0.07 | 0.06 | 0.13 |
| Fuels | 0.03 | 0.27 | 0.2 | 0.01 | 0.07 | 0.04 | 0.1 | 0.03 | 0.06 | 0.19 | 0.09 | 0.2 | 0.82 | 0.06 |
| Hides and Skins | 1.16 | 2.29 | 1.85 | 1.66 | 1.64 | 1.68 | 1.86 | 2.19 | 2.66 | 2.58 | 3.2 | 2.62 | 2.55 | 2.98 |
| Mach and Elec | 0.25 | 0.28 | 0.23 | 0.26 | 0.44 | 0.68 | 0.47 | 0.32 | 0.26 | 0.34 | 0.2 | 0.19 | 0.3 | 0.35 |
| Metals | 0.82 | 1.16 | 1.31 | 1.31 | 1.09 | 0.74 | 0.63 | 0.84 | 0.58 | 0.5 | 0.77 | 1.37 | 0.91 | 0.54 |
| Minerals | 1.19 | 0.72 | 0.89 | 1.87 | 1.93 | 1.46 | 2.02 | 3.02 | 2.58 | 2.9 | 3.49 | 3.81 | 3.28 | 4.98 |
| Miscellaneous | 0.28 | 0.25 | 0.36 | 0.25 | 0.21 | 0.19 | 0.14 | 0.12 | 0.18 | 0.2 | 0.17 | 0.17 | 0.19 | 0.35 |
| Plastic or Rubber | 2.6 | 2.33 | 1.89 | 1.35 | 1.32 | 0.99 | 0.59 | 0.72 | 0.59 | 0.79 | 0.9 | 0.76 | 0.64 | 0.62 |
| Stone and Glass | 0.36 | 0.06 | 0.04 | 0.04 | 0.02 | 0.06 | 0.03 | 0.33 | 0.3 | 0.21 | 0.62 | 0.61 | 1.31 | 2.53 |
| Textiles and Clothing | 0.16 | 0.16 | 0.32 | 0.35 | 0.63 | 0.55 | 0.73 | 0.65 | 1.26 | 1.03 | 1.07 | 1.23 | 1.38 | 1.46 |
| Transportation | 0.03 | 0.43 | 0.03 | 0.01 | 0.01 | 0.02 | 0.79 | 0.07 | 0.24 | 0.5 | 0.43 | 0.56 | 0.95 | 1.36 |
| Vegetable | 4.21 | 2.77 | 1.45 | 0.27 | 0.42 | 0.8 | 1.91 | 2.64 | 2.47 | 2.49 | 4.78 | 3.64 | 2.16 | 1 |
| Wood | 0.17 | 0.24 | 0.35 | 0.48 | 0.46 | 0.25 | 0.21 | 0.27 | 0.28 | 0.31 | 0.28 | 0.39 | 0.31 | 0.55 |

Source: WITS

The RCA measures of bilateral trade between India and Vietnam from the year 2002 to 2015 is shown in Table 2. Considering export RCAs of commodities at the stage of production level, it can be observed that the trade in exports of raw materials shows a clear relative advantage. Standing at an RCA index of 4.16, it is by far the most advantageous of the four groups in 2002. Exports of intermediate goods also show a relative advantage, though marginal, at 1.34. Both capital goods and consumer goods are observed to be areas of relative disadvantage as export commodities. Standing at 0.22 and 0.79 respectively in 2002, a clear disadvantage can be observed for the two categories. Raw material exports maintain its standing in 2015 with an RCA value of 3.8, with a trend of stable advantage throughout the years. Though intermediate good RCAs have also stayed stable for the most part, a fall in relative advantage can be observed in 2014, but shows signs of recovery, going up 0.06 points in 2015. Consumer goods have shown improvement in their RCA, going up 0.41 points from 2002 to 2015, transforming from a category of relative disadvantage to one of relative advantage.

Malaysia

Table 3

| Stage of Production | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capital goods | 0.32 | 0.22 | 0.37 | 0.27 | 0.28 | 0.26 | 0.3 | 0.26 | 0.33 | 0.36 | 0.31 | 0.25 | 0.3 | 0.26 |
| Consumer goods | 1.1 | 0.97 | 0.87 | 1 | 0.96 | 1.46 | 1.06 | 1.35 | 1.1 | 0.9 | 1.38 | 1.42 | 1.49 | 1.34 |
| Intermediate goods | 1.84 | 2.22 | 1.82 | 2.09 | 2.24 | 2.06 | 1.92 | 1.69 | 1.63 | 1.57 | 1.44 | 1.45 | 1.21 | 1.47 |
| Raw materials | 5.12 | 5.08 | 4.34 | 3.52 | 2.85 | 2.06 | 2.26 | 2.59 | 2.61 | 2.36 | 1.97 | 2.06 | 2.21 | 2.45 |
| Product Group | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Animal | 13.6 | 13.4 | 11.3 | 15.9 | 14.2 | 8.24 | 6.2 | 8.84 | 9.21 | 7.9 | 7.48 | 6.5 | 7.98 | 8.05 |
| Chemicals | 2.35 | 2.82 | 2.2 | 3.13 | 3.29 | 2.19 | 1.57 | 2.42 | 1.72 | 2.69 | 2.44 | 2.44 | 2.53 | 1.38 |
| Food Products | 1.07 | 1.39 | 2.29 | 1.16 | 1.27 | 1.22 | 2.41 | 1.07 | 1.09 | 0.85 | 1.79 | 0.73 | 1.27 | 0.64 |
| Footwear | 2.85 | 1.35 | 2.61 | 3.55 | 2.59 | 1.72 | 1.8 | 1.86 | 2.6 | 2.29 | 1.72 | 1.23 | 1.65 | 0.97 |
| Fuels | 0.06 | 0.06 | 0.21 | 0.13 | 0.25 | 0.89 | 0.71 | 1.02 | 0.63 | 0.36 | 1.35 | 1.59 | 1.48 | 1.48 |
| Hides and Skins | 3.26 | 6.66 | 6.4 | 8.61 | 11.2 | 8.95 | 7.57 | 5.56 | 8.48 | 6.18 | 5 | 3.83 | 4.68 | 3.55 |
| Mach and Elec | 0.28 | 0.2 | 0.29 | 0.22 | 0.27 | 0.26 | 0.3 | 0.26 | 0.33 | 0.36 | 0.25 | 0.22 | 0.29 | 0.25 |
| Metals | 1.64 | 2.16 | 1.62 | 2.17 | 2.13 | 2.56 | 2.34 | 1.94 | 1.96 | 1.47 | 0.78 | 1.25 | 0.74 | 2.46 |
| Minerals | 4.21 | 3.29 | 2.32 | 3.13 | 2.01 | 1.2 | 1.3 | 1.61 | 1.77 | 1.06 | 1.64 | 1.52 | 1.68 | 2.1 |
| Miscellaneous | 0.9 | 0.74 | 0.58 | 0.79 | 0.64 | 0.25 | 0.1 | 0.45 | 0.51 | 0.42 | 0.84 | 0.51 | 0.39 | 0.38 |
| Plastic or Rubber | 0.52 | 0.66 | 0.51 | 0.6 | 0.95 | 0.43 | 0.48 | 0.63 | 0.41 | 0.59 | 0.3 | 0.37 | 0.27 | 0.23 |
| Stone and Glass | 1.69 | 1.6 | 1.12 | 0.91 | 0.77 | 0.65 | 0.74 | 1.08 | 1.03 | 0.62 | 1.04 | 0.96 | 0.75 | 0.32 |
| Textiles and Clothing | 5.68 | 5.25 | 3.84 | 3.65 | 3.49 | 2.58 | 2.36 | 1.66 | 3.22 | 3.53 | 2.3 | 2.1 | 1.97 | 1.8 |
| Transportation | 0.61 | 0.56 | 1.14 | 0.8 | 0.35 | 0.18 | 0.29 | 0.21 | 0.25 | 0.3 | 0.35 | 0.25 | 0.26 | 0.23 |
| Vegetable | 6.69 | 8.14 | 7.15 | 4.93 | 4.81 | 5.5 | 5.64 | 4.6 | 5.08 | 4.15 | 3.69 | 3.73 | 3.52 | 2.97 |
| Wood | 0.93 | 0.97 | 0.76 | 0.79 | 0.61 | 0.54 | 0.2 | 0.25 | 0.4 | 0.33 | 0.26 | 0.25 | 0.25 | 0.27 |

Source: WITS

The RCA measures of bilateral trade between India and Malaysia from the year 2002 to 2015 is shown in Table 3. By observing RCA data for the year 2002, it becomes obvious that trade in raw material exports have a clear comparative advantage, standing at an index value of 5.12. Relative advantages are also observed in the categories of trade in intermediate foods as well as consumer goods, which stand at values of 1.84 and 1.1 respectively. Exports of capital goods suffer a relative disadvantage in 2002.

By 2015, the relative advantage pertaining to raw material exports are seen to have halved. What once was at a major relative advantage at 5.12 points, is observed to have come down to 2.45 in 2015, a reduction of 2.67 points. Intermediate goods are observed to have maintained their relative advantage, but is also observed to have lesser comparative advantage, falling 0.37 points. Consumer goods also maintain a relative advantage with a value of 1.34. Capital goods are observed to have fallen further in relative disadvantage by 0.6 points.

Indonesia

| 11111 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capital goods | 0.18 | 0.27 | 0.28 | 0.36 | 0.4 | 0.54 | 0.58 | 0.94 | 0.77 | 0.74 | 0.77 | 0.8 | 0.74 | 0.89 |
| Consumer goods | 0.84 | 0.68 | 0.27 | 0.34 | 0.41 | 0.34 | 0.66 | 0.45 | 0.97 | 0.57 | 0.55 | 0.49 | 0.66 | 0.57 |
| Intermediate goods | 1.85 | 1.83 | 2.17 | 2.6 | 2.44 | 2.35 | 1.82 | 1.65 | 1.35 | 1.48 | 1.46 | 1.25 | 1.38 | 1.48 |
| Raw materials | 0.84 | 0.94 | 0.85 | 0.36 | 0.47 | 0.54 | 0.83 | 0.74 | 0.96 | 1.46 | 1.5 | 1.87 | 1.39 | 0.84 |
| Product Group | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |

| | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Animal | 0.5 | 0.19 | 0.54 | 0.29 | 0.18 | 0.36 | 0.38 | 0.4 | 0.41 | 0.5 | 0.64 | 0.65 | 0.2 | 0.28 |
| Chemicals | 1.66 | 1.77 | 2.12 | 3.22 | 2.85 | 2.79 | 2.18 | 2.3 | 2.08 | 2.42 | 2.42 | 2.2 | 2.33 | 2.58 |
| Food Products | 5.42 | 3.33 | 5.45 | 3.34 | 3.72 | 3.91 | 4.55 | 1.88 | 1.74 | 2 | 1.51 | 1.2 | 1.1 | 0.75 |
| Footwear | 0.73 | 1.21 | 1.4 | 1.91 | 0.38 | 0.24 | 1.55 | 1.73 | 1.99 | 1.42 | 1.58 | 1.63 | 1.65 | 2.03 |
| Fuels | 0.12 | 0.37 | 0.14 | 0.19 | 0.22 | 0.01 | 0.57 | 0.3 | 0.91 | 0.35 | 0.31 | 0.22 | 0.41 | 0.18 |
| Hides and Skins | 2.14 | 1.73 | 2.68 | 3.71 | 1.95 | 3.85 | 1.53 | 1.61 | 1.75 | 1.7 | 2.16 | 1.85 | 1.62 | 2.02 |
| Mach and Elec | 0.22 | 0.34 | 0.32 | 0.37 | 0.35 | 0.5 | 0.54 | 1.02 | 0.74 | 0.54 | 0.63 | 0.76 | 0.58 | 0.7 |
| Metals | 1.19 | 1.6 | 1.42 | 2.03 | 2.22 | 2 | 1.4 | 1.39 | 0.9 | 1.03 | 0.94 | 0.74 | 0.88 | 1.03 |
| Minerals | 1.86 | 1.01 | 4.03 | 1.04 | 0.94 | 0.99 | 1.51 | 1.38 | 1.44 | 2.28 | 1.59 | 1.85 | 1.23 | 1.48 |
| Miscellaneous | 0.38 | 0.16 | 0.1 | 0.25 | 0.24 | 0.29 | 0.19 | 0.24 | 0.13 | 0.2 | 0.57 | 0.44 | 0.34 | 0.48 |
| Plastic or Rubber | 0.88 | 0.74 | 0.66 | 0.57 | 0.56 | 0.41 | 0.32 | 0.58 | 0.56 | 0.7 | 0.67 | 0.62 | 0.71 | 0.7 |
| Stone and Glass | 1.16 | 1.06 | 0.79 | 1.33 | 0.98 | 2.26 | 1.61 | 1.35 | 0.97 | 1.13 | 0.97 | 1.18 | 1.05 | 0.76 |
| Textiles and Clothing | 0.4 | 0.55 | 0.99 | 1.15 | 1.88 | 2.3 | 1.83 | 1.03 | 1.37 | 1.09 | 0.95 | 0.98 | 1.14 | 1.12 |
| Transportation | 0.25 | 0.15 | 0.13 | 0.25 | 0.42 | 0.74 | 0.65 | 0.57 | 0.86 | 1.41 | 1.13 | 0.87 | 1.61 | 1.9 |
| Vegetable | 4.13 | 3.8 | 2.63 | 1.48 | 1.22 | 1.07 | 1.4 | 1.91 | 2.01 | 3.02 | 4.24 | 6.49 | 4.59 | 2.27 |
| Wood | 0.15 | 0.05 | 0.12 | 0.26 | 0.2 | 0.25 | 0.1 | 0.2 | 0.11 | 0.19 | 0.21 | 0.14 | 0.14 | 0.25 |

Source: WITS

The RCA measures of bilateral trade between India and Indonesia from the year 2002 to 2015 is shown in Table 4. Considering data at the stage of production level, it is possible to understand that India does not possess relative advantages in the export of capital goods, consumer goods as well as in raw materials in 2002. India is observed to be at a marginal disadvantage of 0.16 points in export of raw materials and consumer goods, while in the case of capital goods, it is much worse, at 0.82 points. The only category that shows an advantage for India is in the case of export of intermediate goods. Intermediate goods show an RCA index value of 1.85, indicating a clear relative advantage in export trade.

The general condition persists throughout the years, with the three sectors that showed relative disadvantage in 2002, still showing a state of disadvantage in 2015. Export of capital goods have improved, showing a reduction in relative disadvantage, standing at 0.89 up from 0.18. Consumer goods end up worse in 2015, down to 0.57, a drop in 0.27 points, though it showed signs of improvement in 2010. Intermediate goods maintain its advantage in a stable fashion throughout the time period.

Thailand

Table 5

| Stage of Production | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Capital goods | 0.18 | 0.26 | 0.22 | 0.29 | 0.39 | 0.46 | 0.54 | 0.69 | 0.73 | 0.63 | 0.7 | 0.6 | 0.81 | 0.7 |
| Consumer goods | 0.66 | 0.52 | 0.85 | 0.98 | 1.09 | 1.1 | 0.67 | 0.59 | 0.7 | 0.86 | 0.75 | 0.66 | 0.86 | 0.81 |
| Intermediate goods | 2.76 | 2.84 | 2.64 | 2.51 | 2.29 | 2.05 | 2.17 | 2.16 | 1.81 | 1.79 | 1.85 | 2.12 | 1.78 | 1.76 |
| Raw materials | 0.59 | 0.42 | 0.25 | 0.3 | 0.31 | 0.27 | 0.27 | 0.33 | 0.45 | 0.42 | 0.56 | 0.36 | 0.41 | 0.62 |
| Product Group | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Chemicals | 1.97 | 1.87 | 1.53 | 1.85 | 1.76 | 1.59 | 1.58 | 2.13 | 1.91 | 1.97 | 1.93 | 1.87 | 2.22 | 2.87 |
| Food Products | 3.58 | 2.84 | 6.97 | 3.78 | 4.53 | 4.07 | 6.57 | 4.75 | 3.5 | 3.4 | 4.27 | 3.86 | 2.07 | 0.84 |
| Footwear | 0.47 | 0.51 | 0.35 | 0.23 | 2.28 | 2.97 | 3.75 | 1.05 | 2.61 | 2.32 | 0.68 | 0.76 | 1.22 | 0.95 |
| Fuels | 0.56 | 0.31 | 0.56 | 0.54 | 0.59 | 0.67 | 0.19 | 0.04 | 0.16 | 0.26 | 0.07 | 0.07 | 0.2 | 0.04 |
| Hides and Skins | 3.04 | 2.39 | 2.04 | 1.61 | 1.26 | 1.01 | 1.08 | 0.9 | 1.08 | 1.11 | 1.47 | 1.71 | 1.92 | 1.18 |
| Mach and Elec | 0.17 | 0.28 | 0.21 | 0.23 | 0.32 | 0.4 | 0.49 | 0.58 | 0.6 | 0.47 | 0.52 | 0.47 | 0.47 | 0.49 |

| | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Metals | 1.84 | 2.27 | 1.72 | 1.49 | 1.33 | 1.29 | 1.6 | 1.15 | 1.12 | 0.81 | 0.81 | 1.69 | 1.23 | 1.04 |
| Minerals | 1.26 | 1.3 | 1.11 | 1.42 | 1.5 | 1.19 | 1.59 | 2.11 | 3.34 | 2.13 | 4.14 | 3.41 | 3.33 | 3.64 |
| Miscellaneous | 0.28 | 0.27 | 0.3 | 0.3 | 0.27 | 0.25 | 0.31 | 0.42 | 0.45 | 0.48 | 0.53 | 0.53 | 0.51 | 0.53 |
| Plastic or Rubber | 0.18 | 0.2 | 0.26 | 0.42 | 0.42 | 0.44 | 0.45 | 0.51 | 0.56 | 0.59 | 0.64 | 0.63 | 0.8 | 0.87 |
| Stone and Glass | 6.83 | 6.51 | 6.23 | 6.63 | 5.85 | 5.61 | 2.8 | 3.31 | 2.3 | 2.33 | 2.56 | 1.99 | 1.87 | 1.84 |
| Textiles and Clothing | 0.76 | 0.85 | 1.37 | 1.59 | 2.01 | 1.97 | 2.14 | 2.17 | 2.41 | 2.57 | 3.17 | 2.52 | 2.44 | 2.24 |
| Transportation | 0.2 | 0.04 | 0.22 | 0.59 | 0.78 | 0.66 | 0.63 | 1.06 | 1.25 | 1.22 | 1.3 | 0.93 | 2.26 | 1.53 |
| Vegetable | 1.53 | 1.52 | 1.25 | 1.49 | 1.29 | 1.12 | 1.17 | 1.43 | 1.65 | 2.22 | 3.57 | 2.71 | 2.24 | 1.98 |
| Wood | 0.09 | 0.1 | 0.14 | 0.17 | 0.2 | 0.21 | 0.3 | 0.32 | 0.53 | 0.45 | 0.33 | 0.35 | 0.28 | 0.38 |

Source: WITS

The RCA measures of bilateral trade between India and Thailand from the year 2002 to 2015 is shown in Table 5. RCAs of commodities at the stage of production level in 2002 tells us that India held a relative advantage in the export trade of intermediate goods. At an index value of 2.76, India had a clear relative advantage in trade of intermediate goods over Thailand. The same cannot be said the other three categories, capital goods, consumer goods and raw materials. All three of those categories are observed to be at a relative disadvantage, with values 0.82, 0.34 and 0.41 points respectively below unity in 2002.

In 2015, the situation is observed to have maintained its status quo. The only category of export that held a relative advantage in trade over Thailand was observed to be intermediate goods, at an RCA value of 1.76. Capital goods showed a trend of improvement, though still at a relative disadvantage, rising 0.52 points, 0.18 to 0.7. Consumer goods, as wells as raw material trade, is shown to have had a relatively stable trends through the time period.

Reference

Ballassa (1965), "Trade Liberalisation and "Revealed" Comparative Advantage", Manchester school of Economics and Social Studies, 33: 99-123.

Steven Brakman & Charles van Marrewijk, 2015. "A Closer Look at Revealed Comparative Advantage: Gross-versus Value Added Trade Flows," CESifo Working Paper Series 5321, CESifo Group Munich.

Daniela Marconi & Valeria Rolli, 2007. "Comparative advantage patterns and domestic determinants in emerging countries: an analysis with a focus on technology," Temi di discussione (Economic working papers) 638, Bank of Italy, Economic Research and International Relations Area.

Sinanan, Damie & Hosein, Roger, 2011. "Exploring the Evolution and Persistence of Revealed Comparative Advantage in the Agricultural Sector," 2011 West Indies Agricultural Economics Conference, July 17-21, 2011, St. Vincent, West Indies 187910, Caribbean Agro-Economic Society.

Nimesh Salike & Benli Lu, 2015. "An Examination of Nepal's Export Choice based on Revealed Comparative Advantage," NRB Economic Review, Nepal Rastra Bank, Research Department, vol. 27(1), pages 75-89, April.

Ufuk Gunes Bebek, 2011. "Robustness of the Proposed Measures of Revealed Comparative Advantage," Studies in Economics 1121, School of Economics, University of Kent.

Elsa Leromain & Gianluca Orefice, 2014. "New revealed comparative advantage index: Dataset and empirical distribution," International Economics, CEPII research center, issue 139, pages 48-70.

Veena K. Pailwar & Nirav R. Shah, 2009. "Revealed comparative advantages for India in services trade," *International Journal of Trade and Global Markets*, Inderscience Enterprises Ltd, vol. 2(2), pages 109-127.

Widodo, Tri, 2009. "Dynamic Comparative Advantages in the ASEAN+3," *Journal of Economic Integration*, Center for Economic Integration, Sejong University, vol. 24, pages 505-529.

Belay Seyoum, 2007. "Revealed comparative advantage and competitiveness in services: A study with special emphasis on developing countries," *Journal of Economic Studies*, Emerald Group Publishing, vol. 34(5), pages 376-388, October.

Batra (2005), "Revealed comparative advantage: An analysis of India and China", Working Paper 168, Indian Council for research on international economics relations, New Delhi, August.

Burange (2008), "India's Revealed Comparative Advantage in Merchandise Trade, Working paper UDE28/6/2008.

Muhammad Saqib Irsahd & Qi Xin, 2017. "Determinants of Exports Competitiveness: An Empirical Analysis through Revealed Comparative Advantage of External Sector of Pakistan," *Asian Economic and Financial Review*, Asian Economic and Social Society, vol. 7(6), pages 623-633, June.

Bagaria, Nidhi & Santra, Swarup & Kumar, Rajesh, 2014. "A study on variation in comparative advantage in trade between China and India," MPRA Paper 53287, University Library of Munich, Germany.

Setyastuti, Rini & Adiningsih, Sri & Widodo, Tri, 2018. "The Dynamics of Comparative Advantage in the ASEAN Region," MPRA Paper 86541, University Library of Munich, Germany

