

VIETNAM CROSS BORDER TRADE SINCE JOINING ASSOCIATION OF SOUTHEAST ASIAN NATIONS (ASEAN)

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DOI: <https://doi.org/10.5281/zenodo.14033977>

Published Date: 04-November-2024

Abstract: This study clarifies the general picture in the Vietnam – ASEAN trade relations, identifying the sectors that Vietnam has comparative advantage and the factors affecting export growth. By using data from UN Comtrade and revealed comparative advantage (RCA) index, we can find out that the value of export and import turnover in Vietnam has increased but the proportion has decreased rapidly since 2007. Besides, because the structure and comparative advantages of Vietnam and some countries are similar, there will be strong competition with each other, especially with Indonesia and Cambodia. From that point, the paper predict the trade trends of Vietnam to the ASEAN market in the future and bring out suitable solution.

Keywords: Cross border trade, Export structure, Revealed Comparative Advantages, Trade trend.

1. INTRODUCTION

ASEAN or officially called the Association of Southeast Asian Nations is a 10-nation alliance, composed of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. It was established in 1967, originally composed of only Indonesia, Malaysia, Philippines, Singapore and Thailand. It was brought up and formed because of the need for stability of regional politics and conflicts, geopolitical factors, economic development and cooperation to fix any issues in the area. By 1984, Brunei soon then followed after its independences from British and Vietnam in 1995 soon after the end of Cold War. Nowadays, ASEAN has been one of the grandest economic success stories during the past decades. It went to a relatively poor region to become one of the most exciting emerging markets, that manufactures innovative products and services, then export them globally. It is a nation that once had 29 billion USD gross domestic product in 1970, making it one of the world's poorest regions. But by 2023, it is now estimated to be about 3.6 trillion USD. Its growth rate during the past decade has far surpassed that other emerging markets like Eastern Europe (EE), Africa, Latin America and Central Asia. Moreover, the sea block trade also grown from only 790 billion in 2000 and grew to 2.8 trillion by 2019. Led by the rigorous export economy and as the association becomes an attractive destination for commodities.

1986 is considered as a milestone marking Vietnam started implementing economic transformation policies towards attaching importance to the role of the market and opening up to the world. Since 1990, the average growth rate of Vietnam's trade has been approximately 19% per year. After joining Association of Southeast Asian Nations (ASEAN) in 1995, Vietnam has closely linked trade with other countries in the region. ASEAN is an important trading partner of Vietnam. Studies on trade integration show the positive impact of free trade agreements on economic growth, especially on trade between Vietnam and ASEAN countries. However, when the ASEAN Economic Community (AEC) comes into effect, it is required to study and re-evaluate the process of trade exchange between Vietnam and ASEAN over the past 20 years and its future trend. This study clarifies the general picture in the Vietnam – ASEAN trade relations, identifying the sectors that Vietnam has comparative advantage and the factors affecting export growth. From that point, the paper predict the trade trends of Vietnam to the ASEAN market in the future and bring out suitable solution.

2. REVEALED COMPARATIVE ADVANTAGE (RCA)

Absolute advantage from Adam Smith, comparative advantage from David Ricardo or the Heckscher-Ohlin model have explained the benefits of concentrating national resources in the production of goods in order to increase the welfare of the economy but they have not shown how to measure a country's comparative advantage in trade relations between economies.

The use of trade theories in measuring the comparative advantage of countries is difficult when analyzing inputs because of the dynamic relationship and complexity of factor costs. Derived from the study of Balassa (1965), the Revealed Comparative Advantage (RCA) index is calculated based on theories of comparative advantage and historical statistical data on product exchange between countries. The RCA index is the ratio of two shares, how much competitive is a product in country's export compared to that product's share in the global trade. RCA of country A in a given product i is calculated as follows:

$$RCA = \frac{\frac{x_{Ai}}{\sum_{j \in P} x_{Aj}}}{\frac{x_{wi}}{\sum_{j \in P} x_{wj}}}$$

Where

P is the set of all products

x_{Ai} is the country A's exports of product i

x_{wi} is the world's exports of product i

$\sum_{j \in P} x_{Aj}$ is the country A's total exports (of all products j in P)

$\sum_{j \in P} x_{wj}$ is the world's total exports (of all products j in P)

When $RCA > 1$ or a country has a revealed comparative advantage, that country will be considered as a competitive producer and exporter of that product than other countries producing and exporting that good at or below the world average. The higher the value of a country's RCA for product i, the higher its export strength in product i.

The RCA index has been widely used in research to assess competitive advantage in an economy's trade system, typically the studies of Ferto & Hubbard (2003), Utkulu & Seymen (2004), Seyoum (2007), Shinyekwa, Isaac & Othieno (2011), Esmaeili (2014). However, the RCA index still contains many limitations because it only measures the advantages of goods that can only be considered within the economy, not directly comparing the advantages between countries' goods. Therefore, we need to compare the commercial separation technique which based on three driving forces:

- Firstly, increase due to increased market demand (WS): calculated at a rate equal to the growth rate of imports of goods of the partner (ASEAN) corresponding to each type of goods of Vietnam.
- Secondly, increase due to reasonable industry structure (IM): calculated at a rate equal to the growth rate of imports by commodity group of the partner (ASEAN) for each type of goods of Vietnam.
- Thirdly, increase due to exploitation of competitiveness (RS): is the remaining component calculated from the real growth value in Vietnam's goods exports minus 2 components calculated WS, IM above.

Then, total exports value ΔTS_i of product S in year t

$$\Delta TS_i = \Delta WS_i + \Delta IM_i + \Delta RS_i$$

3. VIETNAM-ASEAN TRADE RELATION

3.1 Current situation

According to data from UN Comtrade to classify product group SITC, in 2023, Vietnam's trade value was around 681.04 billion USD, as five times as trade value in 2015 (162 billion USD) and 14 times as trade value in 2007 (48.5 billion USD). The process of sharp increase in the value of exported goods was accompanied by a sharp change in the export

International Journal of Novel Research in Marketing Management and Economics

Vol. 11, Issue 3, pp: (26-32), Month: September - December 2024, Available at: www.noveltyjournals.com

structure, in which, the group of industrial products (group 7) increased dramatically from only 7% of the total trade value in 1997, by 2007 – the time when Vietnam started joining the WTO this rate increased to 12%, by 2023, it will become a key commodity group in the total trade value of Vietnam’s goods with rate is about 37%. Meanwhile, the group of agricultural and mineral products dropped sharply in the structure of Vietnam’s exports. However, agricultural products still account for an important part of Vietnam’s export structure, accounting for about 12% of the total export value of goods in 2023.

The amount of export items in Vietnam increased rapidly, but the top ten most valuable export items did not change much, focusing on fossil oil, textiles – footwear, seafood and other agricultural products. Since 2011, electronic products have appeared in the group of items with great export value. By 2023, electronic equipment had become the top export item and a product of the industry classified as high technology. The structure of key export products of Vietnam in 2023 showed a heavy bias when the group of electronic and communication equipment accounted for nearly 50% of the total export value of 10 main product groups of the economy.

Table 1: Trade value of top 10 product groups in Vietnam

2000	Trade value (million USD)	2007	Trade value (million USD)	2023	Trade value (million USD)
Fossil oil	3.500	Fossil oil	8.500	Electronic equipment	33.068
Shoes	1.100	Coffee	1.900	Shoes	12.439
Seafood	793	Shoes	1.800	Textiles	6.673
Rice	667	Rice	1.500	Wooden households	5.186
Coffee	501	Seafood	1.400	Women clothes	4.885
Office equipment	486	Wooden households	1.300	Men clothes	4.834
Cephalopod	397	Leather shoes	1.300	Computer	4.800
Men pants	314	Rubber	1.100	Semiconductor	4.726
Women jacket	275	Fish	1.100	Fossil oil	3.824
Men jacket	266	Anthracite	999	Fruit	3.233

Source: UN Comtrade

The results of the calculation of the RCA index based on the export data of SITC-classified Tier 4 goods show that, in 2000, Vietnam exported 494 items, of which 144 items (accounting for about 29%) have a revealed comparative advantage; By 2007, the number of exported products increased to 869 and the number of items with revealed comparative advantage was 207 (accounting for about 24%), this increase was 6 times respectively in the number of exported products and 1.4 times the number of products with revealed comparative advantage compared to 2000. In 2023, Vietnam exported about 920 items and the number of products with revealed comparative advantage was about 212 items (equivalent to about 23%). Thus, in the period 2007-2023, the number of export products as well as comparative advantages increased much slower than in the 2000-2007 period. In which, the group of agricultural products and minerals are the industries with a rapid increase in the number of export items, while the group of products in the industrial production and assembly industries has increased rapidly in both the number of export items and the amount of exported products as well as the number of industries with revealed comparative advantages.

Table 2: RCA of product groups

Group/Year	Trade products			Trade products with RCA		
	2000	2007	2023	2000	2007	2023
Group 0	69	112	122	32	31	30
Group 1	9	10	10	2	1	1

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 Vol. 11, Issue 3, pp: (26-32), Month: September - December 2024, Available at: www.noveltyjournals.com

Group 2	44	88	83	19	28	22
Group 3	5	15	12	4	2	2
Group 4	11	17	17	6	4	4
Group 5	48	118	121	5	6	6
Group 6	134	221	230	26	59	59
Group 7	93	190	193	11	20	26
Group 8	93	130	130	44	61	62

Group 0: food and animals

Group 1: drink and cigrattes

Group 2: raw fuel

Group 3: minerals

Group 4: chemical products

Group 5: industrial products

Group 7: transport machines

Group 8: electronic components

Based on the RCA index rankings in 2023 compared with 2007 and 2000 shows a rapid increase in new items and capacity expansion in light industries. Some items with high technology content such as photographic equipment, galvanized steel and ships have appeared in Vietnam's exports. This is a positive change in the export structure of the economy towards products with higher capital depth and technology.

Table 3: RCA ranking

Product	RCA ranking		
	2000	2007	2023
Photographic equipment	204	47	1
Thorium	-	3	2
Splinter	90	21	3
Dry peppercorn	3	7	4
Sport shoes	1	4	5
Galvanized steel (w<600)	-	231	6
Starch/ inulin/ gluten	40	15	7
Ship	600	728	8
Fish	261	10	9
Women jacket	22	17	10

Source: Calculate based on data from UN Comtrade

Table 4: Export shares of key products in 2023

No.	Product	Export share in 2023	Technology index
1	Radio equipment	15.51%	5
2	Electronic components	3.42%	5
3	Leather shoes	2.62%	3
4	Computer	2.57%	5
5	Rlectron	2.52%	5
6	Fossil	2.36%	1
7	Sport shoes	2.28%	3
8	Wooden household	1.78%	3
9	Cable	1.75%	4
10	Rice	1.72%	2

Source: UN Comtrade

3.2 Future trend

In the first 10 years of joining ASEAN, ASEAN is Vietnam's largest import partner, surpassing Japan and the EU. However, since 2007, the proportion of Vietnam's exports to ASEAN has gradually decreased. By 2023, ASEAN was only the fourth largest export market after the US, China and EU. The growth rate of Vietnam's exports to ASEAN countries has dropped sharply in recent years, from 32.8% in 2011 to 4.8% in 2023.

Analysis based on UN Comtrade data classified by SITC 4, in 2000, the number of commodity groups Vietnam exported to ASEAN was about 288, by 2007 it increased by nearly 3 times with 797 groups of products. In the period from 2007 to 2023, the number of items exported to the ASEAN market slowed down, only increasing by about 57 groups of products. In 2000, the goods exported by Vietnam to ASEAN countries with an export value of 100 million USD or more consisted of crude oil, rice, office equipment and printed circuits; By 2007 there was the appearance of electronic products and by 2023 there were 39 items, in which there was an expansion of the metallurgical industry and other industrial production besides the traditional ones.

In the list of products with the highest export value over the years, products from exploitation, utilization of natural resources and agricultural products have decreased relatively, many commodity groups are no longer in important positions in Vietnam's exports to ASEAN countries. Electronic components, crude oil and rice are the main export products to the world and are also in the top 10 key export items of Vietnam to the ASEAN market. This implies that other key commodities such as seafood, light industrial products, and other agricultural products are mostly exported to markets outside the ASEAN region.

The growth-component analysis shows that the contribution to the increase in Vietnam's exports to the ASEAN market is due to increased market demand, partly due to industry structural factors and, importantly, due to exploitation of competitive advantage. Specifically, in the period 2000-2007, the market demand factor contributed to 57% of Vietnam's export growth to the ASEAN market. Meanwhile, the factor of reasonable industry structure does not contribute significantly for Vietnam's export growth to this market. Meanwhile, in the period 2007-2023, most of Vietnam's exports to ASEAN countries are due to exploiting competitive advantages (66%) in addition to increased ASEAN market demand (21%). Thus, from the trend of the two research periods 2000-2007 and 2007-2023, it shows that most of the increase in Vietnam's exports to ASEAN countries is based on exploiting available advantages (66%).

Table 5: Factors affect increase in trade value of Vietnam to ASEAN

Index	2000 - 2007	2007 - 2023
Increase in trade value (billion USD)	5	10
Due to an increase in ASEAN market demand (WS)	57%	21%
Due to industrial structure (IM)	3%	13%
Due to exploitation of competitiveness (RS)	40%	66%

Source: Calculate based on data from UN Comtrade

- Firstly, the group of agricultural products and exploitation products mainly natural comparative advantage of Vietnam is still the group of industries with a high increase in export value in both periods. In particular, the sharp increase in the period 2007-2023 mainly comes from the increasing demand in the ASEAN market for Vietnamese agricultural products.
- Second, the group of fuel industry (group 3), despite having high value growth in the period 2000-2007, but in the period 2007-2023, there has been a sharp decline, this is partly due to the important reason from the export price of this commodity group decline.
- Third, the group of industrial and assembled products with a rapid increase in export value in the 2007-2023 period is the assembly industry and machinery and equipment industry (period 2007-2023 increase about 4.8 billion USD). All of these industries largely exploit competitive advantages in the industry to increase export value.

Table 6: Factors affect increase in trade value of Vietnam to ASEAN (product group)

Group	2000 - 2007				2007 - 2023			
	Increase in trade value (million USD)	Due to an increase in ASEAN market demand (WS)	Due to industrial structure (IM)	Due to exploitation of competitiveness (RS)	Increase in trade value (million USD)	Due to an increase in ASEAN market demand (WS)	Due to industrial structure (IM)	Due to exploitation of competitiveness (RS)
0	1006.5	47%	8%	44%	1203.2	82%	49%	-31%
1	57.2	8%	0%	93%	160.8	45%	-12%	67%
2	79.2	144%	-36%	-7%	139.2	28%	13%	59%
3	2168.5	89%	-9%	20%	-1326.9	60%	-93%	132%
4	6.1	111%	25%	-36%	85.0	8%	1%	91%
5	287.9	12%	0%	88%	783.6	32%	-9%	77%
6	797.5	18%	-2%	84%	3155.4	24%	-9%	85%
7	492.4	-14%	82%	32%	4832.3	5%	0%	95%
8	205.0	74%	-27%	53%	1010.4	54%	-22%	68%

Source: Calculate based on data from UN Comtrade

4. CONCLUSION AND SUGGESTED SOLUTION

4.1 Conclusion

The number of export items of Vietnam increased rapidly in the period 2000 - 2023, however, the top 10 export items with the largest value did not change much. The structure of export industries changed slightly when there were items in the electronics industry developed from FDI inflows. In the period 2007 - 2023, the number of exported products and the number of products with revealed competitive advantages increased slowly. However, the group of products belonging to the industrial production and assembly industries increased rapidly both in terms of the number of exported products as well as having revealed competitive advantages. Some products with high technology content such as photographic equipment, galvanized steel and ships have appeared in Vietnam's exports, this is a positive change in the export structure of the economy.

In trade relations with ASEAN, the value of export and import turnover of Vietnam has increased but the proportion has decreased rapidly since 2007. The growth rate of Vietnam's exports to ASEAN countries has decreased sharply in recent years, from 32.8% in 2011 to 4.8% in 2023. Vietnam has a continuous trade deficit, in which the trade deficit increased rapidly in the period 2000-2007, gradually decreased in years later, but the deficit seems to be on the rise again.

Vietnam's exports to the ASEAN market are products with comparative advantages. Besides similar export products to the world, Vietnam also exports industrial products to ASEAN countries such as steel, glass and building materials. The increase in Vietnam's exports to the ASEAN market is mainly due to increased market demand and the exploitation of available advantages, especially in the period 2007 - 2015. Therefore, with the trend of trade liberalization with growing trade in the region, Vietnam has the opportunity to take advantage of the market factor and this process will promote the creation of very good trade between Vietnam and a number of economies in the region. On the other hand, because the structure and comparative advantages of Vietnam and some countries are similar, there will be strong competition with each other, especially with Indonesia and Cambodia.

4.2 Suggested solution

Firstly, ASEAN is still an important trading partner, so Vietnam needs to focus on trade policies with countries in the region and prevent a significant decline in export growth to the market. In this regard, especially Vietnam-ASEAN trade relations are in the context that the ASEAN Economic Community (AEC) has been established based on the pillars of free movement of goods, services and factors of production. In this context, the economy welcomes great opportunities and challenges in terms of trade and investment in the regional chain of production of goods. In particular, on the issues of trade in goods, the AEC established a large product consumption market with trade barriers removed and the homogenization of regulations. This helps Vietnam's advantageous products to expand exports and dominate the market.

International Journal of Novel Research in Marketing Management and Economics

Vol. 11, Issue 3, pp: (26-32), Month: September - December 2024, Available at: www.noveltyjournals.com

Therefore, Vietnam also needs to continue to support businesses to boost exports to ASEAN countries with a market of more than 630 million people, especially in key commodities with large export turnover.

Second, many export industries with Vietnam's revealed comparative advantage have low technology indexes, so more than ever, Vietnam needs to focus on improving the technological level in production to increase the competitiveness of the industry. competitiveness of goods and restructuring of export production. In this process, the Government should promote the role of FDI inflows in developing industries and producing high-tech products.

Third, the competitive advantages of Vietnam and some countries in the region have similar structural similarities, so the flow of capital along the production chain will be emphasized more. Vietnam needs to be ready to receive and actively participate in the intra-regional capital movement in these commodity groups and actively cooperate with ASEAN countries to export advantageous products to the world market.

Finally, in trade relations with ASEAN countries, Vietnam needs to focus on implementing export support policies and establish strong trade with the economies of Singapore, Brunei, and Malaysia; at the same time, avoid direct competition in the domestic market with products from countries such as Indonesia, Cambodia, the Philippines, and Thailand whose export structure is quite similar to that of Vietnam.

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